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26 August 1983



# Worldwide Report

EPIDEMIOLOGY

No. 329

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HETEROSEXUAL AIDS VICTIM; DISEASE 'NOTIFIABLE' IN NSW

Diagnosis in Melbourne

Sydney THE AUSTRALIAN in English 6 Jul 83 p 1

[Text]

A THIRD Victorian victim of acquired immune deficiency syndrome (AIDS) has been diagnosed in Melbourne. The latest sufferer is believed to be heterosexual, and is understood to be the first non-homosexual in Australia to contract the disease.

In America, 1641 cases of AIDS have been diagnosed. Many are homosexual, but increasing numbers of children, women, and heterosexuals are being diagnosed.

The latest Victorian sufferer had recently returned from the United States.

A spokesman for the Health Commission said the man was being treated at an unnamed Melbourne hospital. Nurses at the hospital have asked that he be sent to the Fairfield infectious diseases hospital.

The acting director of the NSW Health Department, Dr Trevor King, said yesterday he believed his department could cope with the present AIDS situation. However, he said the tracing of homosexual contacts was proving difficult.

Dr King said his department would issue leaflets explaining AIDS to community health centres by the end of the week.

"Our major concern is the welfare of the community at large," Dr King said.

Dr King said legislation requiring the registration of AIDS victims was being drawn up, but in the meantime the Department of Health, with its federal counterpart, had an informal system of notification of likely AIDS victims.

The National Health and Medical Research Committee in Canberra has established a working committee to advise Australian governments on appropriate courses of action to cope with the disease.

NSW Health Department Action

Sydney THE SYDNEY MORNING HERALD in English 4 Jul 83 p 2

[Article by Ross Dunn]

[Text]

The NSW Department of Health will begin to send circulars to doctors and hospitals this week informing them that AIDS (Acquired Immune Deficiency Syndrome) is now a notifiable disease.

A spokesman for the Minister for Health, Mr Brereton, said last night the decision was made following a meeting between the minister and representatives of the homosexual community.

During the talks, the representatives strongly urged Mr Brereton to declare the disease notifiable, the spokesman said.

The decision will make it necessary for all doctors and hospitals to

notify the Department of Health if they are treating a suspected victim of AIDS.

They must supply details of the cases, including a description of the symptoms.

Doctors believe AIDS is caused by a virus which overwhelms the cellular immunity system and makes the victims susceptible to a range of acute and chronic infections, acute pneumonia and some tumours.

Associate Professor Ronald Penny, of the University of NSW, who is establishing a project researching the disease at St Vincent's Hospital, last night welcomed the decision.

Professor Penny said all those suf-

fering from the symptoms had to be treated as suspected but now only the Health Department would be able to declare them as actual AIDS cases.

He said this would help to dispel fears among the public caused by the "misreporting of the number of cases."

"Only those figures released by the department will be correct and reliable and this should ease the panic," Professor Penny said.

Professor Penny said the "program concepts" for his research project were still being discussed.

It was expected that the project would get under way in about three weeks' time but until then he preferred not to talk about it.

AIR POLLUTION LINKED TO INCREASE IN ASTHMA CASES

Melbourne THE AGE in English 6 Jul 83 p 5

[Article by Mark Metherell]

[Text]

A sharp rise in the number of asthma cases at the Royal Children's Hospital has been linked with Melbourne's air pollution.

In recent days the hospital has been admitting about eight patients a day suffering from acute bouts of asthma. The normal admittance rate for this time of year is one or two.

The hospital's director of thoracic medicine, Dr Lou Landau, said there had also been an increase in asthma patients being treated in the hospital's casualty ward.

"When we get asthma in bouts like this it usually means an environmental factor is involved," Dr Landau said.

A respiratory medicine physician who has advised the Government on clean air regulations, Dr Jonathon Streeton, said that he would be very surprised if the rise in asthma cases was not associated with Melbourne's recent foggy weather.

Dr Streeton said that new Canadian research had shown a clear link between hospital admittances for asthma-type illness and weather producing high pressure inversion layers which trap pollution in the lower atmosphere.

The Canadian study showed a strong rise in the asthma-type cases 24 to 48 hours after peaks in ozone and nitrogen dioxide levels had been recorded.

Dr Streeton said that while there was unlikely to be much ozone in the

atmosphere during a Melbourne winter because ozone build-up requires sunshine, there was likely to have been high levels of nitrogen dioxide during the past few days.

Dr Streeton said that nitrogen dioxide, which results from atmospheric reactions involving pollutants such as car exhaust fumes, causes inflammations in the smaller air passages, particularly of children.

Doctors have also reported an increase in virus infections in recent weeks, including a few cases of influenza.

The Environmental Protection Authority yesterday was unable to give comprehensive figures of nitrogen dioxide levels in recent weeks because of malfunctions in measuring equipment. But an official said that levels of nitrogen dioxide tended to be relatively high at this time of year.

A virologist at the Fairfield Hospital, Professor Ian Gust, said a handful of influenza A cases had been isolated. He said that while it was always difficult to predict whether there was likely to be a significant outbreak of flu, it would be unlikely this year because of last year's epidemic which would have increased community immunity to flu.

CSO: 5400/7594

BRIEFS

FATAL CHILDREN'S VIRUS--DOCTORS in the intensive care unit of the Royal Children's Hospital have reported a minor epidemic of a sometimes fatal viral infection, bronchiolitis. The illness, which killed large numbers of children in Naples a few years ago, has been blamed for one child's death at the Royal Children's this year, and several seriously ill children have been admitted for treatment in the past week. The staff paediatrician, Dr Ron Clark, said bronchiolitis occurred every year among children up to a year old. In most cases they could be treated at home for minor symptoms of a cold. But some children became so ill they required medical help, including oxygen ventilation, artificial respiration and drip feeding. The illness is caused by a virus called respiratory syncytial. The only preventive measure parents could take was to try to keep young babies away from older children with viral infections, he said. [Brisbane THE COURIER-MAIL in English 13 Jul 83 p 15]

RUBELLA IMMUNIZATION--A BRISBANE City Council immunisation team will visit 64 metropolitan secondary schools between late July and September in the council's fourth rubella immunisation campaign since 1971. The campaign--which is expected to cover 22,000 girls in grades 8, 9 and 10 against the disease better known as German measles--will be in addition to the normal service provided at council clinics. Rubella is normally a mild disease but can be dangerous to an unborn baby if the mother contracts it in the early months of pregnancy. The child may be born with cataracts, deafness, malformations of the heart, low birth weight or retarded physical development. The acting Lord Mayor, Alderman Ardill, said yesterday: "Immunisation against rubella before motherhood provides protection against these dangers." Ald. Ardill said letters to parents and consent forms would be delivered to all secondary schools from next Monday. "It may be another three years before the program is conducted again, so I urge all parents to complete the application card and return it to their child's school without delay," he said. Ald. Ardill said no child could be immunised without parental consent. Students who were absent from school on the day the immunisation team visited could have the vaccination at the council clinics, he said. [Brisbane THE COURIER-MAIL in English 9 Jul 83 p 14]

CSO: 5400/7594

BRAZIL

MALARIA ERADICATION EFFORT TO FOCUS ON AMAZON REGION

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 16 Jul 83 p 11

[Text]--Brasilia--Next year the malaria eradication operations and the financial resources should be concentrated more in the 60 municipios in the Amazon Region, where 80 percent of the cases in the country are recorded. This priority to the most affected region is the result of the fourth meeting of Directors of Malaria Services of the Americas, held last week in Brasilia in the headquarters of the Pan-American Health Organization (OPAS).

According to Jose Fiuze Lima, superintendent of SUCAM (Superintendency for Public Health Campaigns, Ministry of Health), specialists from various countries in the Americas concluded in that meeting that the malaria eradication strategy, which is also used by Brazil, was "inadequate." It has been demonstrated in recent years that, under this system, the number of cases were not reduced; instead, the endemic incidence had risen.

Jose Fiuze Lima explained that the countries have given great attention to areas where transmission of the disease is more limited, instead of making a greater effort in areas of high incidence. Therefore, the specialists concluded that the eradication strategy should be revised and funds should be redirected to the regions where transmission of the disease is greater. According to the SUCAM superintendent, it is better to run the risk of possibly seeing malaria return with greater intensity in areas where it is already somewhat under control than to allow the situation to worsen in the Amazon Region, for example, where the problem is already serious now. Next year SUCAM should have a malaria budget of at least 18 million cruzeiros, most of which will go to the Amazon Region.

According to the American specialists, the areas of malaria transmission have been reduced, which will make it possible to focus attention of the problem areas and to redirect resources. Although they felt that governments should not continue with major efforts to prevent the problem from spreading, they also concluded, on the basis of studies, that other methods besides spraying will be necessary. These include biological, chemical and environmental actions to reduce the population of mosquito carriers.

Another matter much discussed during the directors' meeting was the socioeconomic aspect of the problem. According to Jose Lima, they recommended investigations to identify the factors which bear on the endemic increase.

According to the technicians, since malaria control depends on applied research in the field, the health ministries should coordinate a national program of investigation which would include universities, scientific institutions and, particularly, the malaria control services.

The SUCAM director noted that the WHO and OPAS are prepared to finance studies of the societal aspects of malaria. There will be a meeting in December to evaluate the proposals of about six countries with an interest in this matter, Brazil among them, because they recognize the importance of socioeconomic factors in the spread of the disease.

6362

CS0: 5400/2114



MEDICAL TEAMS COMBAT DISEASE THREAT IN FLOOD-HIT SANTA CATARINA

Sao Paulo O ESTADO DE SAO PAULO in Portuguese 20 Jul 83 p 11

[Text] One death from meningococcic meningitis, several cases of tetanus, suspected cases of measles, countless cases of dysentery, fever, scabies, lice and worms.

These are ailments now appearing as a result of the floods in Santa Catarina. Medical Doctor Oswaldo Vitorino de Oliveira, Health Secretariat assistant for public health affairs, said yesterday that the meningitis case registered in Blumenau was certainly not caused by the floods, but he warned that the carrier of the virus must be circulating in the municipio (and this means danger). Meanwhile, the victim's family has been treated with all the preventive measures.

In the series of dramas that have resulted from the floods, one was added to the rest yesterday: a little girl with gangrene needed to be transported quickly from Prato District to Ibirama. A helicopter left the Navegantes airport for Ibirama, in Alto Vale do Itajai, and tried to reach the child from there, but by the end of the night it was not certain if the rescue operation would be successful. Health Secretary Vanildo Ozelame assured that, since it had not rained in Santa Catarina for 3 days, the efforts to control health problems and care for the stricken were going better.

Yesterday another group of 80 physicians, health officers and nurses went to the Vale do Itajai to attend the patients in Ilhota, Itajai, Gaspar and Rio do Sul municipios. This team is relieving another one which had been in the region for 5 days. In all, there 300 people in the health field in the affected regions, which have also received 30 tons of medicines, while about 25 tons of medicines are stockpiled in Florianopolis.

The number of snake bite victims has also increased greatly. As the waters subsided (the Itajai-Acer River yesterday stood 8.5 meters above the normal level), the people who had been driven from their homes, in their eagerness to return, did not take many precautions. The snakes have taken up residence in mattresses, closets and every corner of the dwellings, which explains the reported cases of snake bites. Individuals have even been bitten by pit-vipers. Doctor de Oliveira also believes that there should be an increase in hepatitis cases, because outbreaks had already been detected in some municipios in the interior even before the floods.

Children

The major victims of the floods have been the children. There are countless cases of intestinal and respiratory infections and fever. For this reason, the Public

Health Service, with the assistance of physicians and students from the Federal University of Santa Catarina, is intensifying the epidemiological watch program. It is hoped that there will be a repetition of what occurred in the Tubarao flood of 1974; although many people became ill, there were no epidemics of typhoid fever or leptospirosis.

For its part, the Civil Defense coordination reported yesterday that the number of deaths resulting from the floods in Santa Catarina had risen to 51. Seven deaths were recorded officially in Blumenau alone, and four were reported in Rio do Sul.

The flood victims have begun to face another problem: the cold. The temperature has dropped sharply in Santa Catarina as the result of a mass of polar air, and colder weather was predicted for today, with possible frost in the western region.

Meanwhile, although the rain has stopped, the situation in Santa Catarina is still critical. Only about 15 of the 140 municipios affected by the floods have managed to overcome the most serious problems. The entire program of aid to the stricken is still in effect, because some regions, particularly in the north, are still very difficult to reach. Over 100,000 people are homeless throughout the state; in the northern region alone, the number has reached 20,000.

6362

CSO: 5400/2114

## BRAZIL

### BRIEFS

PARANA MEASLES OUTBREAK--The incidence of measles continues to increase in Maringa, in northern Parana. The Public Health Service has already admitted that this is an epidemic, since 58 more cases have been registered in various sections of the city in the last 4 days, bringing to 214 the number of children with the disease, which previously had been restricted to the Morangueirinha District, where 156 cases were confirmed in 1 month. The 15th Health District will conduct mass vaccinations through 5 August of all the 21,000 children in the city under 4 years of age who have not already contracted measles. The campaign will include children who have already been vaccinated, because it is suspected that the vaccines used were not effective. [Text] [Sao Paulo O ESTADO DE SAO PAULO in Portuguese 29 Jul 83 p 12] 6362

TRACHOMA OUTBREAK--Ribeirao Preto, Sao Paulo--The Health Secretariat's regional department reported on 27 July that 250 cases of trachoma occurred in Bebedouro in the past 12 months. [Summary] [Rio de Janeiro O GLOBO in Portuguese 28 Jul 83 p 9 PY]

CSO: 5400/2116

## BRIEFS

GASTROENTERITIS IN CUBADAK--Residents of Cubadak in Pasaman Regency, North Sumatra, panicked early in June, particularly on Wednesday, 1 June. The 11,866 residents of Cubadak were frightened by the mass deaths that occurred in 13 villages. Some people died at home, some at the public health centers and some en route to treatment centers. On Tuesday, 31 May, the day before, a woman, Rosda, (age 30) died of complications from the disease after suffering for several days. Her death was considered normal. But the mass deaths that occurred on the next day, 1 June, created an uproar. On that day, one after another, 12 persons died. The first body had hardly been placed in its grave when news followed that so-and-so had also died. Later there was news of another death, and so on until a dozen deaths had been reported. All died from a gastroenteritis epidemic. The total deaths in Cubadak during that week, 31 May to 6 June, numbered 25 of the 447 cases monitored by the local public health center. The epidemic gradually subsided. The public health center, which during that week was filled with patients, is now deserted. During that week 6 doctors and 30 paramedics were called out to treat the victims. Now that the epidemic has subsided, only one doctor remains, Dr Zulhanif Nazar, who heads the Cubadak Public Health Center. He said the gastroenteritis epidemic broke out suddenly possibly because the local residents bathe in, and drink the river water which is always muddy or because they eat food bought in the market. There is also the possibility, for which confirmation is being sought, that the gastroenteritis bacteria came into Cubadak from Padang, about 250 /kilometers/ away. Some days before the disease broke out in Cubadak, it became known that more than 400 cases occurred in Padang while only 3 persons there died of the disease. /Excerpts/ /Jakarta KOMPAS in Indonesian 16 Jun 83 pp 1, 12/ 6804

GASTROENTERITIS IN SOUTH PESISIR REGENCY--Since the beginning of this week, gastroenteritis took 3 lives out of the 18 cases of the disease that were reported for 3 subdistricts of South Pesisir Regency, West Sumatra. South Pesisir Regency borders on Padang Municipality to the south. In early June a gastroenteritis epidemic also struck Cubadak, Pasaman Regency, causing 25 deaths out of more than 400 cases of the disease. /Excerpts/ /Jakarta HARIAN UMUM AB in Indonesian 27 Jun 83 p 5/ 6804

GASTROENTERITIS IN NORTH SUMATRA--In June two regencies in North Sumatra, North and Central Tapanuli, were stricken with the "munmen" (vomit-diarrhea) disease which has taken many lives. Earlier it struck Samosir Island, North Tapanuli Regency, and took 5 lives and some 20 persons were treated for it at the public

health center. The same disease struck Barus Tapanuli Subdistrict and was said to be even more virulent, taking nine lives. Hundreds were treated for the disease. /Excerpts/ /Jakarta MERDEKA in Indonesian 29 Jun 83 p 4/ 6804

RABIES IN SOUTH KALIMANTAN--Rabies, which only recently was confined to the Tabalong Regency, now appears to be spreading to several other areas in South Kalimantan. As of last week victims began to succumb to the disease. A halt had to be called to vaccinations for the life-threatening disease because local officials are still awaiting a new supply of vaccine to be shipped from the Department of Health in Jakarta. The vaccine was ordered last month /May/. Haji Ismail Abdullah, regent of Tabalong, when he was visited by ANTARA last Friday /17 June/ in Tanjung, explained that the number of victims of the disease in his area is reaching the crisis stage, moreover new victims are encountered every day. In the past week more than 25 of some 200,000 residents of Tabalong, he said, were suffering from rabies. This excludes those who live outside the reporting areas of local health personnel. The mayor said 58 cases of rabies occurred between the time rabies was first encountered in mid-May and the present time. This figure excludes those who died before they could be taken to the hospital or who were allowed to suffer because medication has not been made available to the local area. /Excerpt/ /Jakarta HARIAN UMUM AB in Indonesian 21 Jul 83 p 5/ 6804

RABIES IN SOUTH LAMPUNG--From April to mid-June residents of South Lampung Regency area, particularly those living far from subdistrict capitals, have been concerned about an outbreak of rabies in stray dogs. To date 27 persons living in a number of subdistricts have been bitten by such dogs. Some were treated at the general hospital or the nearest public health center. The South Lampung Animal Husbandry Service confirmed that some persons had been bitten by those dogs, but it was difficult to prove that they had been bitten by rabid dogs because most of the dogs were strays. These dogs, the spokesman for the service said, hide in the brush which grows in those subdistricts. Generally victims of bites from these animals are children. /Excerpts/ /Jakarta HARIAN UMUM AB in Indonesian 24 Jun 83 p 2/ 6804

DENGUE FEVER IN YOGYAKARTA--Dengue is still striking Yogyakarta Municipality. According to information gathered by KNI /Indonesian National News Bureau/, several children were stricken with dengue, but it is not yet known how many deaths were caused by the disease. Dr Dewi Sarodjo, chief of the Yogyakarta Municipal Health Service, who was contacted by KNI, confirmed that dengue fever was prevalent in the Yogyakarta municipal area, but she could not offer any information on the number of cases. /Excerpt/ /Jakarta MERDEKA in Indonesian 20 Jun 83 p 4/ 6804

DENGUE FEVER IN SKI JAKARTA--Since April the number of cases and deaths from dengue fever (DHF) were distributed evenly throughout five areas of the Special Capital Region of Jakarta. An appalling number of deaths occurred in several wards. In May in Sunter and Cipinang Besar, respectively, 5 and 14 deaths occurred. Generally victims die at home because treatment is delayed. Dr Syattar Malik, chief of P3M /Eradication and Prevention of Contagious Diseases/ affairs, Special Capital Region of Jakarta Health Service, presented this clarification to newsmen at the Department of Health yesterday /20 June/. In

March there were only 92 cases with 4 deaths, in April the number rose to 242 cases with 8 deaths, and in May it rose again to 322 cases with 21 deaths. As of 18 June, 154 cases were recorded with 2 deaths. [Excerpt] [Jakarta KOMPAS in Indonesian 21 Jun 83 p 3/ 6804]

CHIKUNGUNYA DISEASE IN DKI JAKARTA--In the past 2 weeks a new epidemic broke out in the Kayu Manis area of East Jakarta. Doctors call it bone flu; that is a type of flu or cold that attacks the bones. Its initial symptom is a moderate fever. The next day the spinal column and joints of the knee, elbow and wrist become painful so that it is difficult to get out of bed. Two or 3 days later a rash appears all over the body, particularly on the thighs, back, chest, stomach and upper arms. The emergence of the rash is preceded by a sensation of having been bitten by scores of ants. After the rash disappears on the 5th or 6th day, strength is restored gradually. Families stricken by bone flu say this is the first time they have had the disease which initially they had thought was some type of measles. From the symptoms described by its victims, said Dr Moh. Mashur, member of the Special Capital Region of Jakarta Regional Health Office Contagious Disease Watch Section, the disease is chikungunya. According to Dr Zulrohdi, who accompanied Dr Mashur, chikungunya attacks persons of all ages, but particularly adults. Though dengue fever causes death, this disease is not life-threatening. "Of course the chikungunya disease is cause for concern for its victims, but it is not life-threatening, and many confuse this disease with dengue fever." Dr Zulrohdi said chikungunya broke out in the capital in April and soon thereafter broke out in Sunter, North Jakarta, and then in Petojo. After that one did not hear anything about the disease any more in other areas. On top of that, the disease began to spread in Pontianak and Solo. [Excerpts] [Jakarta SINAR HARAPAN in Indonesian 21 Jun 83 p 2/ 6804]

MALARIA IN CENTRAL MALUKU REGENCY--Dr Andi Pangerang, chief of the Maluku Health Department Regional Office, said 4 deaths occurred there from mid-May to the end of June among the 638 malaria patients treated at the malaria clinic in Central Maluku Regency. These data were submitted by the chief of the Geser Public Health Center; the report was also sent to the Communicable Disease Eradication and Control Directorate in Jakarta. According to this report 90 persons died of the disease which claimed thousands of victims. On Tuesday morning [5 July] in his office Dr Andi Pangerang said the report was incorrect. According to Dr Adhyatma, P3M [eradication and control of communicable disease] director general, Central Maluku is an endemic region for malaria (an area in which malaria normally occurs). But residents of this area for which this type of malaria is endemic usually are immune to such an extraordinary outbreak of the disease and usually are not very ill when stricken. "Usually the deaths are not caused by malaria but by another disease. Those who die also may be newcomers to the area who have less immunity to the disease," Dr Adhyatma said. [Excerpts] [Jakarta SINAR HARAPAN in Indonesian 6 Jul 83 pp 1, 12] 6804

MEASLES IN LIMA PULUH KOTA REGENCY--Twenty-one children died of a measles virus or some type of measles in Sialang, Kapur Sembilan Subdistrict, Lima Puluh City Regency, West Sumatra. The West Sumatra Health Service, which received the report from the Lima Puluh Kota Health Service, said the Sialang area, located at the extreme end of West Sumatra bordering Riau Province, had been stricken by a measles virus. He said measles alone was not the direct cause of death but rather the deaths were caused by complications from another disease. [Excerpt] [Jakarta HARIAN UMUM AB in Indonesian 2 Jul 83 p 9] 6804

RABIES IN TABALONG REGENCY--To date it has been impossible to control rabies which has been spreading in Tabalong Regency, South Kalimantan. Vaccinations are not moving along as had been expected because the supply of vaccine is exhausted. A Tabalong request for 3,000 ampules of vaccine which had been sent to Jakarta rests in Surabaya. Meanwhile H. M. Ismail Abdullah, Tabalong regent, said a local team has been unable to control the epidemic. As of 3 July, it was recorded that 56 persons were bitten by dogs who were suspected of spreading rabies. According to the Tabalong regent, 5 cows are dead because of bites from rabid dogs. Rabies is controlled in Amuntai in an integrated fashion. The system developed there consists of localizing the site of the first incident. If it involves a dog bite, mass vaccinations are administered to all domesticated animals such as dogs, cats, monkeys and similar animals in a 10-kilometer radius of the area. [Excerpts] [Jakarta KOMPAS in Indonesian 7 Jul 83 p 8] 6804

GASTROENTERITIS IN NORTH ACEH REGENCY--A gastroenteritis (munmen) epidemic is striking the Lhok Sukon City Subdistrict, North Aceh Regency, and has caused 7 deaths. Some 20 persons are still under treatment at the public health center in Lhok Sukon City, located 305 kilometers from Banda Aceh City. Gastroenteritis began to spread in February in West, East and North Aceh Pidie. Dozens of persons have died. [Excerpts] [Jakarta HARIAN UMUM AB in Indonesian 1 Jul 83 p 5] 6804

GASTROENTERITIS IN ACEH PIDIE REGENCY--The epidemic of gastroenteritis, which is endemic in Pidie Aceh Regency and which has been spreading in that area since May, has reached an alarming stage and has caused five deaths out of the 246 cases monitored by the Pidie Health Service. [Excerpt] [Jakarta MERDEKA in Indonesian 6 Jul 83 p 4] 6804

CSO: 5400/8433

## BRIEFS

CHAMPASSAK MALARIA WORK--(K. P. L.) In the past 3 years the spraying of DDT against malaria by the district public health service in Phon Thong District, Champassak Province, was a success; 22,318 houses were sprayed; 1(6)2,728 people were given preventive medicine and 92,175 people were given antimalaria medicine. This helped gradually to reduce malaria in this locality, and helped the people to be healthy and strong in order to put all their sweat, energy and intelligence into constructing and defending the nation in its rapid advance to socialism and steadily to raise the people's living standard. /Text/  
/Vientiane KHAOSAN PATHET LAO in Lao 2 May 83 p A8/ 9884

VIENG SAI MALARIA WORK--Starting from March to the end of May 1983 the Vieng Sai District public health service sent a number of cadres to examine people and distribute medicine along the production bases in Sonphet and Pua Cantons in this district in order to control different diseases, e.g., diarrhea, diphtheria, malaria and bronchitis, which often occur in the rainy season. After having done the actual work they were effectively able to treat many tens of malaria and diarrhea patients. Besides using government medicines, they also effectively treated them with traditional medicines. /Text/ /Vientiane PASASON in Lao 17 Jun 83 p 1/ 9884

VIENTIANE MALARIA CONTROL--To carry out the plan of the Vientiane provincial public health service and also the district plan aimed at controlling malaria in time for the season, and preventing the people from contracting diseases so they can put all their energy into this year's rice production, to bear fine fruit, starting at the end of May 1983 the medical team of Sanakham District, Vientiane Province, has sprayed DDT in eight cantons within their own district. They had 700 kg of DDT along with a complete set of equipment. For this operation they divided into two groups. The first group was to be responsible for three northern cantons, and the second group was to be responsible for the five southern cantons. It is expected to take 55 days. Now these medical teams are determinedly and actively carrying out their duty. /Text/ /Vientiane VIENTIANE MAI in Lao 30 May 83 p 1/ 9884

CSO: 5400/4436



## CHOLERA CLAIMS 28 VICTIMS OUT OF 1,806 REPORTED CASES

Kuala LUMPUR NEW STRAITS TIMES in English 17 Jul 83 p 3

[Text]

**KUALA LUMPUR, Sat. —** A total of 28 people have died of cholera out of the 1,806 reported cases in the country since early this year.

The Health Ministry reported that 19 people died of cholera in Sabah, seven in Kelantan and one each in Pahang and Terengganu.

The biggest number of cholera cases was detected in Sabah (1,353), followed by Kelantan (371), Pahang (45) and Terengganu (37).

Out of the total number of cases in Sabah, 43 were detected in Kota Kinabalu, 272 in Sandakan, 19 in Papar, 155 in Tawau and 161 in Labuk and Sugut.

There were 20 carriers in Kota Kinabalu, 74 in Sandakan, 10 in Papar, 36 in

Tawau and 20 in Labuk and Sugut.

In Kelantan, 74 cases have been reported in Tumpat, 25 in Pasir Mas, 38 in Kuala Kerai/Hulu Kelantan, five in Pasir Putih, 191 in Kota Bharu and 19 in Bacuk.

A total of 63 carriers have been detected in Tumpat, eight in Pasir Mas, 42 in Kuala Kerai/Hulu Kelantan, 150 in Kota Bharu and 12 in Bacuk.

In Pahang, five cholera cases and 32 carriers were reported in Pekan, 40 cases and 88 carriers in Kuantan.

A total of 36 cases and 37 carriers have been confirmed in Kuala Terengganu. Only one cholera case was detected in Besut.

The Health Ministry has also declared 15 areas in Sabah and two in Kelantan chol-

era-free after no reports of new cases were made in a period of three weeks.

The areas in Sabah are Keningau, Penampang, Labuan, Tenom, Kuala Penyu, Lahat Datu, Sempurna, Beluran, Kunak, Kinabatangan, Kota Belut, Bauddfort, Tuaran, Kudat and Ranau while those in Kelantan are Tanah Merah and Macang.

The people in the affected areas in these States have been advised to seek medical attention if they have early symptoms of cholera.

The Health Ministry says cholera is contagious. Cholera germs can affect a victim two to three days after contact.

This means that if a person contracts the germs, the symptoms can be detected while he is in the affected area or after he returns home.

Those who have symptoms such as vomiting and purging are advised to see a doctor immediately.

THREE RIVERS CONTAMINATED WITH CHOLERA GERMS

Kuching THE BORNEO POST in English 14 Jul 83 p 3

[Text]

KUALA TRENGGANU,  
Wed: —The cholera  
operations room at the  
general hospital here today  
announced that the Sungai  
Nerus was contaminated  
with cholera germs.

A spokesman of the  
operations room said that  
water samples from the  
river taken near the Buluh  
Gading Bridge were found  
to be contaminated.

This brought the number  
of contaminated rivers in  
the state to three. The  
other two rivers are Sungai  
Trengganu and Sungai  
Marang.

Meanwhile, three  
suspected cholera patients  
were admitted to the  
general hospital here  
today.

They were a 17-year-old  
youth and a 27-year-old  
man from Kampung Sekati  
and Pulau Bahagia, Manir  
and a girl, 11 from  
Kampung Teluk Menara.  
—Bernama

CSO: 5400/4454

## MALAYSIA

### BRIEFS

YELLOW FEVER IN MELAKA--Fifty cases of yellow fever have been reported in Melaka up to last month--20 of them were in the Melaka Tengah District, 17 in Jasin, and 13 in Alor Gajah. Those affected were between the ages of 11 and 40. The director of the State Medical and Health Department, Dr Narajan Singh, advises the people to observe personal hygiene and to refrain from eating uncooked or uncovered food. He says the disease is caused by a virus and can spread through food and drinks. [Text] [Kuala Lumpur Domestic Service in English 1130 GMT 3 Jul 83 BK]

CSO: 5400/4451

HERPES, AIDS ON INCREASE; SYPHILIS, GONORRHEA UNDER CONTROL

Oslo AFTENPOSTEN in Norwegian 3 Aug 83 p 5

[Article by Elisabeth Engesland and Sylvi Leander]

[Text] While the much-discussed illness, herpes II, has increased explosively recently, some of the traditional venereal diseases have shown a slight decline. For the time being, the newly-discovered illness, AIDS, does not represent a big problem in this country. But the fear of herpes seems to have led to some changes in people's sexual habits. It looks as if people are increasingly thinking it over before initiating sexual contact.

Help! I Have Herpes

"Help, I have a cold sore in my mouth, doctor! Can it be herpes? What shall I do?" Typical examples of what the herpes scare has led to. Many worry for no reason at all because they are unfamiliar with the symptoms. It is true that a cold sore in the mouth is also due to a herpes virus, but as a rule it is the more innocent herpes virus I. This kind of oral cold sore usually disappears relatively quickly, though it often returns.

There are several kinds of herpes. One of them, herpes zoster, can cause shingles or chicken pox. There are two variants of so-called herpes simplex, herpes I and II. These often occur concurrently and one does not exclude the other. Both can produce sores in the sex organs, but herpes virus I appears most frequently in the form of cold sores in or around the mouth. It is herpes virus II that most frequently appears in the form of sores on the sex organs.

How can one know if herpes is involved?

"A sore on the sex organs does not always have to be herpes," said Thor Gundersen, director of medicine for the Oslo Health Council. "But if such a sore recurs persistently, there is a greater chance that it is herpes. The first sign of venereal herpes is usually some itching, irritation and

redness before small bumps appear that can turn into sores. This can be unpleasant, sometimes quite painful and it can also be accompanied by headaches, a general feeling of illness or influenza-like symptoms. Some irritability is also common when the infection breaks out."

What does one do then?

"One should visit a doctor and have a diagnosis made. A number of tests are sent in to a laboratory. If it is herpes, one should abstain from sexual contact until the sores are healed and the problems have disappeared.

"Once one has the herpes virus, it usually remains in the body for the rest of one's life. But this does not mean that one constantly goes around with symptoms. Some people have only one attack and never have another one. Others get so-called recurrent herpes, meaning that the attacks recur over and over.

"As a rule, the herpes virus is contagious only during an active episode, although one cannot always be entirely sure. If one is in doubt, good protective measures are the use of condoms or disinfectant creams," said medical director Gundersen.

So far nothing has really been able to deal with the virus. But the symptoms can be relieved. Good hygiene, washing and caring for sores and the application of salves and creams can be of considerable help.

Often a latent virus can break out suddenly. Patients who once have had a herpes infection but apparently are now free of it are definitely not protected from new infections. However that is the case with a number of other infections which often provide lifelong immunity.

A sudden outbreak of herpes does not necessarily mean that one has been infected recently. It can be due to an earlier infection that is being set off, for example in connection with influenza, stress or hormone changes. Cold sores resulting from the herpes virus have existed all along, while herpes genitalis (herpes II) was less common only 4 or 5 years ago. One usually acquires the virus that often produces cold sores way back in childhood, while the other is usually acquired later. Studies show that there are antibodies in people over 50 indicating past infection in 70-90 percent of the population.

Are people reluctant to go to a doctor if they fear that they have been infected by herpes?

"No, on the contrary," said medical director Gundersen. "Many come running in right away. Some write letters. Because the Oslo Health Council is a public institution, this gives many people a feeling of sufficient anonymity.

"Although the British scientists came in first with their new and reportedly effective vaccine against herpes, a number of other scientists around the world have also worked to find vaccines. Research has also concentrated on finding treatment methods for those who are already infected and a quicker method of identifying the herpes virus."

#### Herpes Making Us More Puritanical

Has the presentation by the mass media of the new venereal diseases and their spread here at home and abroad had any influence on people's sexual habits? Has herpes made us more puritcanical? Yes, say professionals AFTENPOSTEN has talked to. Greater caution in selecting partners is one of the results one can detect, Doctor Jan-Henrik Pederstad of the Oslo Health Council said.

"Cut out sex or use a condom," advised DAGBLADET a while back. If the scare headlines had any effect, it must have been in the direction of greater abstinence. The sale of condoms has not shown any increase either before or after the "herpes invasion," according to the Norwegian Medical Depot.

The "it happens, but not to me" attitude is widespread among most people. Even so it seems that the fear of getting herpes or AIDS has made people think twice before they initiate a casual sexual relationship.

"It is quite evident in the United States that people have changed their sexual habits considerably. In homosexual and heterosexual circles it is becoming more common again to ask a partner out on a date in the hope of getting to know the person better before initiating sexual contact. Although I cannot document this with data, it is my absolute impression that we are also beginning to take precautions of this type here at home," said Jan-Henrik Pederstad, member of the Norwegian Society of Clinical Sexology. From a doctor's point of view, it is an advantage in the current situation to reduce the number of partners. But it would be regrettable if sexual activity was repressed altogether because of anxiety about venereal disease. "We should love just as much as before, but it should involve fewer people," was the theme of Pederstad's advice as a doctor.

We asked Berthold Grunfeld in the field of social medicine if he also felt that the heyday of free sexuality was over?

"When people got the impression from newspaper articles that herpes was incurable I certainly do think it created a good deal of fear--an anxiety that has been expressed in a more restrictive sexual life. Herpes has replaced moral warnings. Now it is people's relationship to health and wholesomeness that makes them 'toe the line.' That is entirely in line with the stress people place today on health-promoting measures. The priesthood has been replaced by the doctors who do not preach about eternal damnation but about herpes and AIDS," Grunfeld emphasized.

The fear of getting herpes is naturally based on anxiety about one's own discomfort, but to a large extent the fear of infecting one's marriage

partner or lover has led many people to turn down casual relationships now. The fact that herpes can also break out in a rash in other parts of the body than the sex organs tends to have a restrictive effect, Grunfeld explained. For people who have been infected with herpes, it has caused great mental anguish when the infection has been visible. It has led some people to isolate themselves entirely from the rest of the world during periods when the illness has been active, he said.

#### Do Not Exaggerate Fear of Herpes II

From approximately 20 June to 17 July, 144 new cases of the contagious venereal disease, herpes II, were found in this country. In the same period, 596 patients were registered as having gonorrhea and 298 people went to doctors to be treated for lice.

Doctor Sigmund Aasen of the State Institute for National Health presented these recent figures. He pointed out that such listings can be somewhat imprecise, since one can never check to see that all those infected with venereal disease go to a doctor. In addition, the report percentages are considerably lower in the summertime.

"But the figures show that one should not exaggerate fear of the new venereal disease, herpes II," said medical director Tor Odegaard at the office of social medicine in the Health Directorate. "It has a long way to go before it reaches the level of the most widespread of our venereal diseases, gonorrhea."

Registration of cases of herpes II has been going on since this January and health authorities are following the spread of this disease with great attentiveness.

#### Syphilis, Gonorrhea Under Control

Gonorrhea is still at the head of the list of the traditional venereal diseases, even though the figures now show a declining trend. Gonorrhea and syphilis have dominated the picture for many years. But now there is good control over both these diseases which must be reported and must be treated. Treatment possibilities are also relatively good. But in recent years a number of new sexually-transmitted diseases have been added. Most widely-known and discussed is herpes and the dreaded AIDS disease has also turned up.

One of the most widespread of these diseases today is a certain type of urinary tract infection, "chlamydia." The disease has many similarities to gonorrhea. Several of the symptoms are the same, for example a burning sensation during urination and inflammation of the vagina or Fallopian tubes.

It is important to seek treatment, especially for pregnant women, because the disease can be transmitted to the child at birth. There are also a

number of more or less widespread mucous membrane infections and fungus diseases. Among other things, one has the so-called "trichomonas"--infections that show up in the form of a mucous membrane inflammation with a vaginal discharge.

"Funguses are quite normal in many women," said medical director Thor Gundersen of the Oslo Health Council. He added that scabies and crab lice are also now included under the designation of sexually-transmitted diseases. All such bacterial and fungus infections can be transmitted through sexual contact. However, one can usually treat bacteria and funguses quite effectively, while virus infections are considerably more difficult to deal with.

When asked how one can avoid getting a sexually-transmitted disease, medical director Gundersen answered that one should have just one regular sexual contact. The more sexual partners one has, the greater the chance of being infected.

#### AIDS Not a Big Problem

The new illness, AIDS, does not represent a big problem in this country at the moment. Only two cases have been reported. But although the problem seems to be of a limited nature in the Nordic countries so far, developments are being followed closely. There is no effective treatment for the disease, even though it has been given the highest priority in the United States where a large apparatus has been set in motion both to detect and to combat the disease.

In technical language, AIDS is called Acquired Immune Deficiency Syndrome. This means that the body's defense mechanisms are lowered and one becomes more susceptible to infection. The name AIDS is an abbreviation of the English term, Acquired Immune Deficiency Syndrome.

It has been determined that the disease occurs in specific population groups. So far over 1000 cases have been reported worldwide. But the fatality rate is high, around 38 percent so far.

Around 75 percent of the cases are discovered among homosexual or bisexual men. Among the heterosexual AIDS patients, 60 percent have been drug addicts who injected their drugs. A few cases have been found among hemophiliacs (bleeders) who receive frequent blood transfusions, and one or more cases among children who received numerous blood transfusions from, among others, a patient later identified as an AIDS victim.

Although the causal relationship is far from having been established with certainty, there is much to indicate that AIDS is transmitted with an active infectious substance via blood products or intimate contact.

The disease starts with a little fever, night sweats, loss of weight and swollen lymph glands.



In TIDSSKRIFT FOR DEN NORSKE LAEGEFORENING [Journal of the Norwegian Medical Society], the disease has been given broad coverage and an editorial stated that a person with AIDS or suspected of having it should be regarded as contagious.

It has also been pointed out that those in environments where it is thought there is a chance that AIDS might occur should be informed. There should also be consequences for blood donors from these groups and the most active should refrain from giving blood until the matter has been further clarified.

6578

CSO: 5400/2566

# COUNTRY BEING 'BOMBARDED' BY TWO DIFFERENT INFLUENZA EPIDEMICS

## Two Viruses Blamed

Wellington THE EVENING POST in English 15 Jul 83 p 1

[Text]

New Zealanders are being bombarded by two different epidemics of influenza — one coming from the south and one from the north.

The bugs causing the epidemics are so different that some people could end up catching two doses of flu before the winter is over.

The Health Department has just isolated an A/Philippines-like virus in the north of the North Island. This virus is different to the one responsible for cases in the south.

### Up north

A/Philippines was the virus that the Health Department had been expecting since winter began, and it is likely to be the one responsible for the epidemic in the northern part of the country, said the director of health promotion, Dr Campbell Begg.

"The influenza epidemic in the South Island and in the southern part of the North Island has been due to a totally different type of influenza virus called A/England-like."

He said the northern virus was similar to the Bangkok strain that had been around for a number of years, but samples sent to Australia for testing showed the bug was of the A/Philippines type.

"It's a most unusual situation. We have got an epidemic of influenza sweeping the whole country due to two completely different viruses," Dr Begg said.

"A/Philippines seems to be half-way up the North Island, stretching northwards. The A/England has been found in the rest of the country.

"The interesting situation is whether the A/England will continue northwards and the A/Philippines will continue southwards.

"You could get both. There is no cross immunity."

### Doctor's hope

Dr Begg said the spread of both epidemics was pretty inevitable.

Dr Begg said he hoped people got over one bout before catching another. "Neither appears to be a particularly virulent type of virus."

He said A/England was attacking children and young adults while A/Philippines was hitting all ages.

Dr Begg said there had been a few deaths in children, young adults and elderly people associated with the flu. But he said facts about the cases were sketchy and it was possible there were other factors involved.

### Advice

He advised people to take normal sensible precautions. Anyone who caught the flu should put themselves out of circulation, not go around coughing and spreading the virus.

People who had been vaccinated would have some protection against both varieties of flu, Dr Begg said.

## Flu Situation in Flux

Wellington THE EVENING POST in English 16 Jul 83 p 40

[Text]

THE Health Department says the flu epidemic in the south of the country might be waning, while the northern epidemic is increasing.

Yesterday the department said it had discovered that there were two different flu viruses — one the A/Philippines-like virus that affected people in the north of the North Island, and A/England, which hit elsewhere.

Today, the director of health promotion, Dr Campbell Begg, said the results of district surveys

showed influenza prevalent in most places but waning slightly in the South Island and in the southern part of the North Island.

But Dr Begg said influenza appeared to be increasing a little up north.

The symptoms for both types of flu are the same. They are characterised by a sudden onset — victims are well one minute and ill the next.

They can include a temperature, cough, sore throat, headache, and aches and pains.

## Flu May Be Easing

Auckland THE NEW ZEALAND HERALD in English 22 Jul 83 p 3

[Text]

Aucklanders may be getting on top of the influenza which has caused heavy absences from school and work in the past few weeks.

The head of the virology department at Auckland Hospital, Dr Margaret Croxson, yesterday reported a drop in the number of swabs being tested for the Philippines H3 influenza virus.

The English H1 virus has so far been isolated to the South Island.

CSO: 5400/4453

GEOGRAPHICAL CORRELATION BETWEEN COLORECTAL CANCERS, SCHISTOSOMIASIS STUDIED

Beijing ZHONGGUO YIXUE KEXUEYUAN XUEBAO [ACTA ACADEMIAE MEDICINAE SINICAE] in Chinese No 3, 1983 pp 173-177

[Article by Liu Boqi [0491 0130 7871], Rong Zhenpeng [2051 2182 7720], et. al.]

[Summary] A statistical analysis between colorectal cancers and schistosomiasis in China was reported, using the mortality data of the colorectal cancers and schistosomiasis from 24 provinces. Results show that there is a parallel correlation between mortality rates of colorectal cancers and schistosomiasis in endemic areas in China, especially in areas of higher schistosomiasis mortality rates. But the correlation between schistosomiasis and common cancers of the digestive system (stomach, esophagus and liver) was not significant, indicating that schistosomiasis might be one of the risk factors in carcinogenesis of colorectal cancers in the endemic areas of schistosomiasis.

Table 1 Mortality rate of schistosomiasis and colorectal cancers from 24 provinces, municipalities and autonomous regions. (1/100,000)

	Male		Female	
	Schistosomiasis	Colorectal Cancers	Schistosomiasis	Colorectal Cancers
Zhejiang	4.68	7.01	2.64	5.06
Shanghai	3.90	6.83	2.43	5.76
Jiangxi	3.23	4.15	0.86	2.81
Jiangsu	2.99	5.27	1.85	3.87
Anhui	2.67	4.43	1.03	3.30
Hunan	1.96	3.66	0.44	2.69
Sichuan	0.72	3.92	0.32	2.72
Yunnan	0.52	2.43	0.98	2.75
Shaanxi	0.43	3.85	0.02	1.92
Fujian	0.18	5.85	0.10	3.97
Ningxia	0.05	3.54	0	3.01

[Table 1 continued on following page]

Table 1 - cont'd.

	Male		Female	
	Schistosomiasis	Colorectal Cancers	Schistosomiasis	Colorectal Cancers
Hebei	0.04	4.06	0	3.26
Heilongjiang	0.04	2.95	0.02	3.87
Xinjiang	0.03	2.92	0.13	2.20
Guizhou	0.03	2.70	0.02	2.50
Henan	0.02	3.77	0.01	2.84
Liaoning	0.01	3.96	0.02	3.23
Shanxi	0.01	4.42	0.02	3.87
Xizang	0	2.24	0	1.27
Qinghai	0	3.31	0	2.39
Nei Monggol	0	4.44	0	3.94
Beijing	0	3.97	0	3.72
Tianjin	0	3.73	0.01	3.19
Jilin	0	3.81	0	3.30
Nationwide	1.15	4.08	0.59	3.03

Male:  $r = 0.695$ ,  $P < 0.001$ ; Female:  $r = 0.625$ ,  $P < 0.005$

Table 2 Correlation test of the mortality rate of schistosomiasis and colorectal cancers between males and females at the prefecture and county levels.

	Number of Units	Male		Female	
		r	P	r	P
Prefectures					
Nationwide	164	0.499	$< 0.001$	0.497	$< 0.001$
County Level in Zhejiang	68	0.811*	$< 0.001$	0.852*	$< 0.001$
Counties in Shanghai	10	0.891*	$< 0.001$	0.849*	$< 0.001$
County Level in Jiangsu	75	0.711	$< 0.001$	0.741	$< 0.001$
County Level in Hunan	98	0.577	$< 0.001$	0.412	$< 0.001$
County Level in Anhui	76	0.491*	$< 0.001$	0.438*	$< 0.001$

[Table 2 continued on following page]

Table 2 - cont'd.

	Number of Units	Male		Female	
		r	P	r	P
County Level in Jiangxi	91	0.364	< 0.001	0.226	< 0.005
County Level in Sichuan	51	0.495	< 0.001	0.586	< 0.001
County Level in Yunnan	30	0.472	< 0.001	0.638	< 0.001

\* Comparison of the extent of schistosomiasis in endemic areas: In Zhejiang and Anhui: Male:  $t = 3.479$ ,  $P < 0.001$ ; Female:  $t = 4.661$ ,  $P < 0.001$ . In Shanghai and Anhui: Male:  $t = 2.231$ ,  $P < 0.05$ ; Female:  $t = 1.981$ ,  $P < 0.05$ .

Table 3 Standard mortality rate of schistosomiasis and colorectal cancers in each county of Jiaying Prefecture. (1/100,000)

	Male		Female	
	Schistosomiasis	Colorectal Cancers	Schistosomiasis	Colorectal Cancers
Jiashan	39.82	23.61	44.56	22.71
Jiaying	32.16	21.45	28.45	14.25
Pinghu	25.32	14.62	22.32	11.23
Haiyan	25.18	13.04	19.84	8.60
Tongxiang	16.27	8.62	6.69	6.49
Haining	13.93	9.30	8.64	4.93
Anji	8.53	6.63	4.39	4.10
Changxing	3.74	4.17	2.33	3.35
Deqing	1.96	5.56	1.58	5.16
Wuxing	0.69	4.13	0.45	4.28

Male:  $r = 0.972$ ,  $P < 0.001$ ; Female:  $r = 0.975$ ,  $P < 0.001$ .

Table 4 Correlation test of the mortality rate of schistosomiasis and colorectal, liver, esophagus, and stomach cancers in six provinces and municipalities.

County Level Number of Units	Sex	Colorectal Cancer		Liver Cancer		Esophagus Cancer		Stomach Cancer	
		r	P	r	P	r	P	r	P
Countries in Shanghai 10	Male	0.891	<0.001	-0.638	<0.05	-0.168	>0.05	0.030	>0.05
	Female	0.849	<0.001	-0.281	>0.05	0.288	>0.05	0.091	>0.05
Zhejiang 68	Male	0.811	<0.001	0.039	>0.10	0.172	>0.10	-0.365	<0.005
	Female	0.852	<0.001	0.442	<0.01	-0.075	>0.10	-0.219	>0.05
Jiangsu 75	Male	0.711	<0.001	0.095	>0.10	0.038	>0.10	0.325	<0.01
	Female	0.741	<0.001	0.324	<0.01	0.121	>0.10	0.226	<0.05
Anhui 76	Male	0.491	<0.001	0.311	<0.01	0.175	>0.10	0.233	<0.05
	Female	0.438	<0.001	0.394	<0.001	0.134	>0.10	0.225	>0.05
Jiangxi 91	Male	0.364	<0.001	0.119	>0.10	0.839	<0.001	0.263	<0.02
	Female	0.226	<0.05	0.242	<0.02	0.678	<0.001	0.271	<0.01
Hunan 98	Male	0.577	<0.001	0.179	>0.05	0.319	<0.005	-0.002	>0.10
	Female	0.412	<0.001	0.223	<0.05	0.159	>0.10	-0.088	>0.10

PRESENT STATE, FUTURE PROSPECT OF CHINA'S RESEARCH ON BRUCELLOSIS

Beijing ZHONGHUA LIUXING BINGXUE ZAZHI [CHINESE JOURNAL OF EPIDEMIOLOGY]  
in Chinese No 3, 1983 pp 190-191

[Article by Chi Yulan [1508 3768 5695], Sun Xi [1327 3886] and Zhao Tieli [6392 6993 0500], Research Section of the Chinese Communist Party Central and Local Disease Prevention and Treatment Leadership Group Office]

[Text] Brucellosis is an infectious disease that afflicts both humans and animals. Relatively prevalent in China, the disease seriously endangers the health of the people and the development of animal husbandry. After Liberation, extensive preventive, treatment, and scientific research work was launched; the state of the disease, basically surveyed; the source of the infection, determined; and the disease, for the most part brought under control. Thorough research work in all fields continues to progress and has already registered excellent achievements.

Epidemiological studies of the characteristics of Brucella strains and the different infected areas in China has progressed rapidly. During the past several years, over 1,300 Brucella have been isolated and identified nationally, and the characteristics and distribution of China's Brucella strains have basically been clarified. Altogether there are 4 species and 13 biotypes. Br. melitensis is by far the most prevalent species, followed by Br. abortus, while Br. suis exists only in isolated areas. Based on this taxonomy a preliminary national Brucella distribution map has been prepared. The experiences thus gained have stimulated research in the methodology of Brucella typing. The establishment of the oxidative metabolic method of determining bacteria strains has provided a scientific means of identifying atypical Brucella. The preparation of anti-R serum; the introduction from abroad and breeding of five batches of bacteriophages; and the extraction, purification and content determination of endotoxins from Brucella will have a positive effect promoting the typing and identification of Brucella in China.



Research on *Brucella* bacterial vaccine and its effect on cellular immunity is intensifying and has already provided scientific bases for the adoption of practical measures for immunizing humans and animals. Much experimental work has been carried out in search of and to improve economic, simple and effective preventive measures, and new results have been achieved. Observation of lambs and calves immunized with S2 vaccine verified that this vaccine continued to provide comparatively good immunity until these animals gave one or two births, and the vaccine still gave protection to the vast majority of the calves 29.5 months after immunization.

This vaccine thus permits reductions in injections and admirably meets the objectives of effectiveness and practicality in the use of bacterial vaccines. M5 vaccine was used to immunize does orally and by injection; one year later a majority were still protected. A certain amount of progress was also achieved in the testing of other vaccines: S2 was used to immunize pigs; yaks were given MB5 and were sprayed with S2 vaccine aerosol and M5 vaccine dust; and sheep were immunized experimentally with S2 variety 105. What is worth pointing out is that China has already commenced experimental research in chemical vaccines from *Brucella*. From 104 *Br. melitensis* were extracted antigens A and E. Through immunization of guinea pigs and mice these *brucella* antigens both proved to have excellent protective powers, low agglutination and weak sensitization, thus revealing a potential for advancing immunization of humans through chemical vaccines. At the same time, preliminary studies of the chemical components of antigens A and E prove that the effective immunizing agents in these antigens are specific polysaccharides. Comparative studies of the immune mechanisms of live bacterial vaccines and chemo-antigens indicate that, among immune responses to Brucellosis, humoral immunity plays a relatively important role. Thus we must reevaluate the significance of cellular immunity and humoral immunity in immune responses to Brucellosis.

In the last several years distinct progress has been achieved in the specificity of laboratory diagnoses. Cell migration inhibition tests, lymphocyte blastogenesis tests, rose [3780 3855] and latexleptospiral agglutination inhibition tests have all been conducted. Of note is that the RBPT has been applied comprehensively nationwide as a technique to diagnose human and animal Brucellosis, and in practice this test has demonstrated excellent specificity and sensitivity. In the late 1970s studies using the ELISA began. Recently, ELISA examinations have been made of antigens extracted from different *Brucella* species and of sera infected with different species and types of the organism. Initial discoveries that ELISA titres of homologous *Brucella* antigens and sera were higher than those of heterologous *Brucella* antigens will have a definite significance in future differentiation of the types of immunity and of infection. Recently, the technique of radioimmunoassay has begun to be applied to diagnostic research, and after much work the results obtained indicate that the technique is specific, sensitive and convenient to use. Not only does it aid early diagnosis of Brucellosis, diagnosis of chronic Brucellosis and differential diagnoses, it is also of great benefit to the prevention and cure of the disease.

Clinical therapy and pathogenetic research have also achieved distinct progress. According to initial observations, the Chinese herbal medicines heloderma powder and dioscorea nipponica makino have received good results in treating chronic Brucellosis, with the latter showing distinct desensitization. In order to reduce reaction to treatment, components having quite low levels of endotoxin were extracted from Brucella. The preparations thus obtained were then used to treat a number of patients and were discovered to have curative effects similar to bacterial vaccine but produced very little reaction. This treatment has provided new preparations that will open the way to specific desensitization therapy, but further observation and research are still required. In addition, attention is currently being directed to the role of anaphylactic reactions in the occurrence of Brucellosis. Besides carrying out thorough research on the type IV allergic reaction, we are also observing types I, II and III. Type I has already been determined to exist in laboratory animals, and partial data have already proven that type III also exists in laboratory animals.

Under the correct guidance of the party's policy on scientific research, China's work on Brucellosis has a bright future ahead of it. In order to accelerate the pace of scientific research, we must clarify priorities, concentrate our strengths, coordinate operations, direct our efforts toward research applying technology and find and provide even more effective measures of treatment.

Building on our current foundation we must employ epidemiology and etiology to clarify further the standards of typing and mapping of the distribution of China's Brucella so as to provide a useful basis for the prevention and cure of Brucellosis. We must initiate studies of epidemiological monitoring, strengthen epidemiological investigations in the southern provinces and autonomous regions and make further strides toward mastering the special characteristics of China's natural foci of Brucella infection and the present status and characteristics of new Brucella strains in animals. In the area of providing immunization against Brucellosis we must initiate more thorough studies of each type of preparation in order to provide effective chemical vaccines suitable for humans and effective immunal vaccines suitable for animals such as cattle, sheep and deer. Effective chemo-antigens that have already been extracted have been tested on humans and observed for safety and immunoreaction. Tests of actual immunization in domestic animals further confirmed the length of effect of the S2 and M5 vaccines earlier found in sheep. Research on immunity in herds of cattle and sheep and experimental use of a new vaccine on sheep have begun. Studies of laboratory animals are in progress to explore the immune mechanism from the perspectives of humoral and cellular immunity in order to clarify further the latter's role in fighting Brucellosis.

In view of the fact that the pathogenesis of Brucellosis remains unclear, present treatment is still largely conducted in the dark.

In order to achieve as rapid a breakthrough as possible, a chronic Brucellosis pathogenesis and pharmacotherapeutic key-task coordinating team has been established, spearheaded by the Institute of Epidemiology and Microbiology of the Chinese Academy of Medical Sciences. We plan to begin with a study of the pathogenesis and immune mechanism of chronic Brucellosis, to move on to a further clarification of the underlying causes and resulting clinical manifestations of the disease and then to provide a scientific basis for the search for effective therapeutic drugs. Through laboratory and clinical observation, we hope to find effective drugs for the treatment and prevention of the disease.

12431

CSO: 5400/4152

SCIENTIFIC INVESTIGATIONS ON KASCHIN-BECK DISEASE YIELD IMPORTANT RESULTS

Beijing JIANKANG BAO in Chinese 17 Apr 83 p 1

[Article by Cui Yulan [1508 3768 5695] and Zhao Teili [6392 6993 0500]: "Important Results Were Achieved in Scientific Investigation on Kaschin-Beck Disease in Yongshou County, Shaanxi Province, by Means of Strengthening Cooperation Between Branches of Learning and Combining Together Laboratory and On-the-Spot Work"]

[Text] Kaschin-Beck disease is one of the endemic diseases which seriously affect people's health in some places in China. The scientific investigation of Kaschin-Beck disease conducted in Yongshou County, Shaanxi Province, has achieved important results--accumulating 150,000 units of scientific data and a great amount of scientific materials which are valuable in actual application to prevent and treat Kaschin-Beck disease and theoretically meaningful in its pathogenic research.

Some 180 experts and personnel from 20 units of scientific research institutes, medical colleges and schools, and disease-prevention and treatment organizations belonging respectively to 7 provinces, municipalities, the Chinese Academy of Sciences and the People's Liberation Army have taken part in this investigation. In the period from August 1979 to the end of 1982, by means of strengthening cooperation between branches of learning and combining together laboratory and on-the-spot work, they systematically researched fields of epidemiology, radiology, clinical prevention and treatment, pathology, biochemistry and ecology with new technologies such as electromicroscope, biochemical automatic analysis, and computer multivariate analysis and so forth.

After going through investigation, the state of Kaschin-Beck disease in 192 brigades countywide is understood in the level of radiological diagnosis and classified into different types according to the degree of its movement and gravity. All this will provide scientific basis for making prevention and treatment plans and pathogenic research. The results of 6 prevention and treatment tests conducted in 30 brigades with populations of 2,000 determined that sodium selenite is a medicine whose effect is quite good. The popularization of comprehensive measures such as "eating various kinds of food, improving the quality of water and paying attention to hygiene" has also gained some results. On the basis of 25,000 X-ray films on hand and the assimilation of research results in different places in China, "Diagnosis Standard of

Kaschin-Beck Disease by X-Ray," "Determined Standard of the Curative Effect of Kaschin-Beck Disease by X-Ray," and "Classified Standard of Types of Kaschin-Beck Disease Areas by X-Ray" have been worked out by the cooperation of 3 branches of learning--radiology, pathology and epidemiology. These three standards will play a guiding role nationwide. The biochemical analysis of 88 indices of 1,174 specimens has provided a basic understanding of the biochemical characteristics of the Kaschin-Beck disease. After going through a macroscopic investigation of the environment and tests and determinations of the chemical elements in water, soil, grain and hair of the disease area, it has been made clear that the basic characteristics of the environment there is out of balance in the composition of many kinds of chemical elements and substances with low selenium as the key link. This proves that the selenium content of water, soil, grain and hair is negative in relation to the percentage of Kaschin-Beck disease determined by X-ray, and provides a basis for improving the environment.

12272

CSO: 5400/4144

DISEASE PREVENTION IN HEBEI PROVINCE EXAMINED

Beijing JIANKANG BAO in Chinese 27 Jan 83 p 2

[Article by Zi Weilian [6088 4850 1670], deputy director of the Health Bureau, Hebei Province: "A Strategy for Preventive Medicine Work"]

[Text] Disease prevention work, like other kinds of work, cannot be taken apart from the condition of our country. Ours is a socialist country as well as a developing country. As a socialist country, we are superior in the highly organized state of the masses and the medical and sanitary work. In spite of the fact that equipment and technical levels of our medical institutions in cities and villages are low, we still manage to form a medical and sanitary network which has played and will keep on playing an important role in disease prevention. As a developing country, the present levels of our economy, science, culture and people's livelihood are still not high enough, and facilities for health and sanitation are still not well enough equipped. This concrete condition will inevitably find expression in disease prevention.

The 32-year practice of disease prevention in Hebei Province shows that remarkable results have been gained in treatment of those diseases which can be prevented and cured by means of organizing large-scale activities of protective inoculation, preventative medication, general survey and general treatment, some disease prevention and cure even reach the level of developed countries. On the contrary, as to diseases which are caused by the underdeveloped levels of our economy and science, the imperfect facilities for health and sanitation and the wrongdoings of people's sanitary habits as well as the lack of specific protective methods in preventative medical science, the progress of their prevention and cure is quite slow and the disparity with developed countries is also great.

In Hebei Province, smallpox was eliminated in 1953 by widespread vaccination; 100,000 cases of Kala-azar were eliminated in 1958 by a general survey and treatment. Cases of malaria have decreased from 600,000 before the country's liberation in 1949 down to under 3,000 at present by large-scale preventative medication. The local incidence of goiter has dropped from 2 million cases in the early periods of liberation to the present 100,000-odd by a major measure of adding iodine to salt. Stressing the control of measles and infantile paralysis in the work of immunity has been conducted energetically in a planned way (about 20 million person-portion of protective inoculation were given

yearly) since 1974, the result was that the incidence of measles has dropped 92.5 percent, from an average of 120,000 cases yearly in the 1970's to 9,560 cases in 1980; and the incidence of infantile paralysis has dropped 96.6 percent, from an average of 1,400 cases yearly in the 1970's to 53 cases in 1980. There has not been a single case of diphtheria since 1979. Effects of protective inoculation show in the large-range drop in the incidences of encephalitis B, epidemic cerebrospinal meningitis which pose serious threats to children's health and lives. Starting in 1979, spending only 2 years in general survey and treatment of metroptosis, the figure of patients has dropped from 90,000 to 30,000, its complete cure will be basically fulfilled in another year. But diseases caused by poor sanitary conditions and sanitary habits such as dysentery, hepatitis and so forth, have a high incidence in the province, this reflects that our sanitary level on the whole is low.

Our superiority and strong points have been reviewed, their roles must be given full play; at the same time, our inferiority and weak points must be clearly kept in mind, raising our enthusiasm and subjective activities to do as well as possible a job in restraining and cutting down the effects of poor conditions. Therefore, I maintain that in work of disease prevention, we should be in accordance with conditions of our country and hold "raising superiority and restraining inferiority" as the strategic principle. "Raising superiority" means to fully play our superiority of highly organized state of the people and the medical and sanitary work under the socialist system, working out plans according to the conditions of manpower and finance, consolidating and expanding the gained achievements and the scale of disease prevention and cure to which the main measures applied are protective inoculation, preventative medication, general survey and general treatment, striving for the elimination and control of measles, infantile paralysis, encephalitis B, epidemic cerebrospinal meningitis, pertussis, tetanus, pulmonary tuberculosis, malaria and so forth in several years. This superiority should be brought into further play step-by-step in curing hypertension, coronary heart disease and some malignant tumors which are seriously endangering people's health, doing jobs as well as possible to limit their harmfulness. In view of the situation in the province, the work of primary importance in "raising the superiority" is to do a good job in planned immunity, the protective inoculation of more than 20 million person-portion of various vaccines every year must be implemented. If we really do a good job in this program, patients' figure of 10 kinds of communicable diseases can be dropped in a large range in about 2 or 3 years, one or two of those diseases may even be eliminated basically. As to dysentery, hepatitis and so forth, because they are diseases caused by the poor sanitary conditions of communities and, for the time being, lack of specific protective vaccines and medicine to prevent them, we should go through the present widespread patriotic sanitation campaign of the masses, improve the sanitary conditions of cities and villages, heighten people's level of sanitary knowledge, limit the factors which may cause their epidemic, meanwhile, take some possible protective measures as supplement to cut down their incidence step-by-step. This is what I call "restraining inferiority."

For the past 32 years, under the influence of the "left" ideology, work of disease prevention in Hebei Province also had some mistakes of "high quota" and "great plan," we must draw lessons from them forever. Anyway, at present, we should not just sit there and wait for our economy to catch up with developed countries in order for our work in disease prevention to start catching up with or surpassing them. This is the sense of responsibility we must have.

IMPROVING DRINKING WATER QUALITY IN COUNTRYSIDE BY 1990

Beijing RENMIN RIBAO in Chinese 22 May 83 p 3

[Article by Zhang Jianti [1728 0494 0232]: "Central Patriotic Sanitation Campaign Committee Puts Forward That It Will Strive for Supplying Sanitary Water to Peasants Nationwide by 1990; Since Liberation in 1949, Achievements in Improving Supply of Qualified Water Are Remarkable, Popularized Rate of Running Water in Cities Is 85 Percent, 40 Percent of Peasants Enjoy Sanitary Water in Rural Areas"]

[Text] Remarkable achievements have been gained in improving the supply of water in both China's urban and rural areas. At present, the popularized rate of running water in cities nationwide is 85 percent, and in rural areas, 40 percent of peasants enjoy safe and sanitary water of which 15 percent is running water. The Central Patriotic Sanitation Campaign Committee requests all localities that water sanitation both in urban and rural areas must continue to be handled well and to strive for supplying sanitary water to peasants nationwide by 1990.

The supply of drinking water in old China was very backward. In the 70-year period from 1879, the year the first waterworks were built, to 1949, only 72 cities had waterworks, 9.62 million people enjoyed running water, with 240 million tons of water supplied daily and 7,589 km of water-supplying pipelines. In the vast rural areas, there was no running water at all, and peasants used only water from wells, rivers and ponds; therefore, a great amount of infectious intestinal diseases occurred. Since the founding of new China, the party and government are very concerned about the sanitation of drinking water in both urban and rural areas, the supply of drinking water has been developed on a rather large scale. At present, 221 of all 247 cities nationwide have centralized water-supplying systems and 616 waterworks were built in cities. As compared with those of 1949, there is a 6.1-time increase of water-supplying pipelines, 13.6-time increase in the daily water-supply amount and the popularized rate of running water in cities has reached 85 percent. In recent years, along with the improvement of living standard, vast numbers of peasants are active in developing suction wells with hand-operated pumps and in building simplified supply systems of running water; these have greatly improved the condition of drinking water. According to incomplete statistics, 350 million peasants, 40 percent of their total population nationwide, enjoy safe and sanitary water of which 15 percent is running water. The popularized



rate of running water has reached 40-70 percent in Tongxian and Daxing Counties of Beijing Municipality, Jinxian County, Shanxi Province, Deqing County, Zhejiang Province, Tonghai County, Jiangsu Province, Huanglong and Dali Counties, Shaanxi Province, Jiayang and Chao'an Counties, Guangdong Province, and Chongqing County, Sichuan Province. Fifty-nine percent of the rural population in Hebei Province enjoy sanitary water. Because of attention paid to improving drinking water, the quality of water meets the sanitary standard, infectious intestinal diseases have decreased in many localities. There are already 5 million people in fluoride disease areas nationwide who have safe water to drink, thus, the harmfulness of fluoride poisoning is reduced steadily.

Recently, the Central Patriotic Sanitation Campaign Committee put forward at the "International Study Group of the '10-Year' Drinking Water Supply and Environmental Sanitation" that the spirit of the State Council document issued in 1981 on the improvement of the quality of drinking water in the countryside must be further implemented, striving for supplying sanitary water to peasants nationwide by 1990.

[An Attached Report] The "International Study Group of the '10-Year' Drinking Water Supply and Environmental Sanitation" run cooperatively by the Central Patriotic Sanitation Campaign Committee and the Ministry of Health of China, the World Health Organization, the Administration of Technology Cooperation of the Federal Republic of Germany and the World Bank that started on 20 April at Jinxian County, Dalian Municipality, was closed on 7 May. The above article listed contents which China has carried out and will carry out in her participation in the "10-year" international activities of drinking water and sanitation. Chinese and foreign experts introduced and instructed experiences and technique of water quality improvement in the "study group."

12272

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EFFECTS OF POLLUTION ON HUMAN HEALTH STUDIED

Beijing ZHONGGUO HUANJING KEXUE [ENVIRONMENTAL SCIENCES IN CHINA] in Chinese No 2, 1983

[Article by Wang Zishi [3769 1311 4258], Xu Fang [1776 2455], and Lin Hanzong [2651 3352 1350], Health Institute, Chinese Academy of Medical Science; Li Yushan [2621 3768 0810], Liaoning Provincial Sanitation and Antiepidemic Station; Zhou Minghe [0719 2494 3109], Hebei Provincial Sanitation and Antiepidemic Station; Fu Yuzhi [0102 3768 3112], Tianjin Municipal Sanitation and Antiepidemic Station; Zhao Xuefang [6392 1331 5364], Shandong Provincial Sanitation and Antiepidemic Station; and Shi Yaxian [4258 0068 0341], Jiangsu Provincial Sanitation and Antiepidemic Station: "Investigation and Study of Effects on Human Health of Pollution in the Bo Hai and Yellow Sea" (Combined Research Team Investigation of Effects on Human Health of Pollution in the Bo Hai and the Yellow Sea)]

[Text] I. Introduction

The Bo Hai and the Yellow Sea are two of China's major oceans extending from the mouth of the Yalu Jiang in the north to Qidongju in Jiangsu Province in the south. Along their coast lies Liaoning, Hebei, Shandong and Jiangsu Provinces and the city of Tianjin. This coastline is more than 6,000 kilometers long, and holds an important position in the development of China's national economy. In recent years, as industry has developed, large quantities of industrial wastewater and human sewage has been discharged into the Bo Hai and the Yellow Sea polluting them to varying degrees with toxic substances such as petroleum, mercury, arsenic, lead, cadmium and organic chlorine pesticides, a pollution which endangers the health of coastal inhabitants, particularly the broad masses of coastal fishermen.

This situation has aroused serious attention of leaders at all levels who have called for study and investigation of the effect on human health of pollution in the Bo Hai and the Yellow Sea.

A combined team drafted a unified "Investigation Outline and Measuring Methods on the Effects of Human Health of Pollution of the Bo Hai and the Yellow Sea," and conducted an investigation at 36 observation points along the coast of the Bo Hai and the Yellow Sea on the health of nearly 1.28 million fisherfolk and nearby peasants, and on the state of environmental pollution. (See Figure 1)

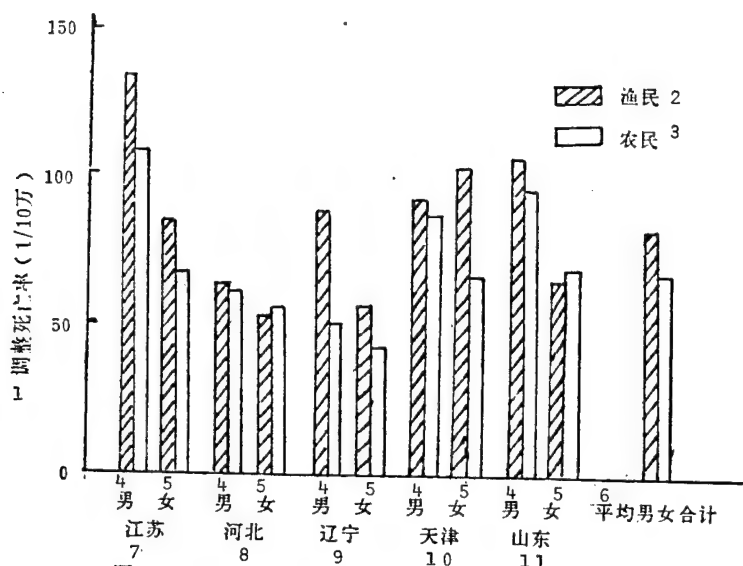


Figure 1. Comparison of Death Rate From Malignant Cancers Among Fisherfolk in Five Provinces and Municipalities Between 1976-1979

Key:

- |                                    |   |
|------------------------------------|---|
| 1. Adjusted death rate (1/100,000) | 6. Average male and female total figure |
| 2. Fisherfolk                      | 7. Jiangsu Province                     |
| 3. Peasants                        | 8. Hebei Province                       |
| 4. Males                           | 9. Liaoning Province                    |
| 5. Females                         | 10. Tianjin Municipality                |
|                                    | 11. Shandong Province                   |

## II. Substance and Methods of Investigation and Research

### 1. Selection of Targets of Investigation and Distribution of Investigation Sites

Pollutants can affect human health through different channels; however, the effect is mainly through the aquatic food chain. For this reason, we selected fisherfolk living along the coast (including the families of fishermen) as targets for investigation of the effects on human health of marine pollution, and we used as a control group peasants in nearby areas with virtually identical socioeconomic circumstances and medical treatment conditions, but who were not directly dependent upon the sea. The main difference between these two categories of people, aside from their occupations, was that the fisherfolk ingested more marine products than did the peasants. Along the coast of the Bo Hai and the Yellow Sea, a total of 36 sites were selected, 20 for fisherfolk and 16 for peasants.

### 2. Health Survey of Coastal Fisherfolk and Peasants

Included in the population structure of the coastal inhabitants was growth and development data, incidence of chronic illnesses, and a review of causes of

death of middle and primary school students (7-15 years old). Measurements were taken of middle and primary school students' height, weight, height in a sitting position, and chest size, and unified national methods of checking children's growth and development were used. The incidence of chronic illnesses derived from current records of illnesses kept in local medical treatment organizations. A house-by-house registration and survey followed by physical examination was conducted for those afflicted with chronic illnesses. In some cases in Shandong and Hebei Provinces, major clinical tests were conducted. Survey of causes of death over a 4-year period (1976-1979) was carried out using the investigation methods written up by the Tumor Prevention and Control Research Office of the Ministry of Health.

### 3. Toxic Substances Measured in the Human Body

(1) Hair. At both the survey sites and the control sites, male fisherfolk and male peasants were selected for measurement of the total mercury, arsenic, cadmium and lead in hair samples taken about 1 centimeter away from the scalp.

(2) Urine. Total mercury, arsenic, lead, cadmium, chromium, DDT and benzene hexachloride.

(3) Human milk. DDT and benzene hexachloride.

(4) Body fat. DDT and benzene hexachloride.

### 4. Toxic Substances Measured in Food

(1) Aquatic products. Total mercury, arsenic, lead, cadmium, chromium, DDT, benzene hexachloride and benzo (a) pyrene.

(2) Grain. Mercury, arsenic, lead, cadmium, chromium, DDT and benzene hexachloride.

(3) Drinking water. Mercury, arsenic, lead, cadmium, chromium, DDT and benzene hexachloride.

(4) Table salt. Mercury, arsenic, lead, cadmium, chromium, DDT and benzene hexachloride.

### 5. Measurement Methods

Methods of measuring all indices were carried out according to uniformly stipulated testing methods.

(1) Total mercury. Cold atom absorption method.

(2) Mercurumethane. Gas chromatography method.

(3) Lead. Graphite furnace atomic absorption method.

(4) Cadmium. Graphite furnace atomic absorption method.

(5) Chromium. Graphite furnace atomic absorption method; erben tanxian erjing [0059 0058 8955 7913 0058 3661] color comparison method.

(6) Arsenic. Diethyldithiocarbamic acid, silver color comparison method.

(7) DDT. Gas chromatography method.

(8) Benzene hexachloride. Gas chromatography method.

### III. Survey Results and Discussion

#### A. Survey of Coastal Inhabitants' Health

##### 1. Population Structure

Population structure of the five coastal provinces and municipalities tested at the end of 1979 included 564,884 fisherfolk of whom 50.97 percent were males and 49.03 percent females; and 712,966 peasants of whom 49.96 percent were males and 50.04 percent were females. Among both fisherfolk and peasants alike, most of the population sampled was in the over 10 age group. However, the percentage of population in the 5-10 age group was smaller than in the 10-15 age group. The percentage of those in the 0-5 age group was smallest. This is related to the initiation of planned parenthood in recent years and a decline in the birth rate. Among fisherfolk and peasants alike in the five coastal provinces and municipalities, the structure of each age group was substantially the same.

##### 2. Survey of Growth and Development of Middle and Primary School Students

Height, weight, chest size, and sitting height of 40,773 primary school students were measured. In terms of height and weight growth and development of both fisherfolk and peasant students was at the intermediate level. Growth and development of fisherfolk students tended to be superior to that of peasant students. This may be the result of fisherfolk eating more aquatic products than do peasants.

##### 3. Survey of Chronic Illnesses

The survey of 150,183 coastal inhabitants included 79,241 fisherfolk and 70,942 peasants. No pattern of difference between fisherfolk and peasants in the overall incidence of illness was found.

In a survey of chronic illnesses, it was found that the fisherfolk group in Hebei Province had a markedly higher incidence of cardiovascular disease than did the peasant control group. Among fisherfolk, those suffering from high blood pressure were 1.35 times as numerous than among peasants; those with heart disease were 0.64 times more numerous; and those with hardening of the arteries of the brain were 0.22 times more numerous. Following standardization, the difference was more striking. A survey of factors causing disease

was done. Fisherfolk were ranked in terms of the amount of fish they ate, and the incidence of cardiovascular disease was figured in terms of each ranking. Following standardization, an interrelated analysis was made. The results showed no pattern of relationship between the incidence of disease and the quantity of fish eaten. This showed that fish consumption was not a principal element affecting cardiovascular disease. Examination of the relationship between the incidence of disease and the hardness of water, the amount of chlorides and nitrate salts it contained likewise uncovered nothing noteworthy. Next, the two groups of people were divided into three groups in terms of the amount of salt they ate as heavy, moderate, or light and then correlated this to the incidence of disease. It was found that a major factor leading to increase in the cardiovascular disease rate among fisherfolk may be the amount of salt they consume. This tallies with related data that reported a close relationship between the amount of salt consumption and the incidence of high blood pressure. In addition, the percentage of male fishermen who smoked (78.9 percent) was higher than that of male peasants (59.9 percent), and this was a supplementary factor giving rise to differences in the rates of cardiovascular disease. The survey devoted attention to factors such as food, mental outlook and heredity as factors possibly affecting disease, but statistical analysis of this data remains difficult. Reasons for coronary vascular disease are frequently many faceted. Several factors usually relate in the case of most patients. The main thing that this survey demonstrated was that marine pollution has not yet markedly affected the incidence of disease.

#### 4. Survey of Reasons for Deaths

(1) The death rate from all factors in the five coastal provinces and municipalities for the period 1976-1979 were listed in decreasing order of frequency. The five main causes of death of inhabitants of fishing areas were as follows: 1) malignant tumors; 2) brain blood vessel disease; 3) other cardiovascular disease; 4) poisoning and other accidental injuries; and 5) respiratory system disease. The five main causes of death of inhabitants of farming areas were: 1) other cardiovascular diseases; 2) brain blood vessel disease; 3) malignant tumors; 4) respiratory system disease; and 5) poisoning and other accidental injuries.

Malignant tumors hold first position among reasons for death in fishing areas. In fishing areas and farming areas alike, malignant tumors are the primary cause of death of males and the third most common cause of death of females. Therefore, malignant tumors have become one of the major diseases endangering the health of the people of these regions.

#### (2) Survey of Deaths From Malignant Tumors Among Fisherfolk and Peasants From 1976 to 1979

A total of 1,279,064 people were surveyed in coastal areas of the Bo Hai and the Yellow Sea. Results of the survey show (see Table 1) a death rate from malignancies for males and females as a whole to have been 101.70/100,000, and an adjusted death rate of 82.19/100,000. For peasants, it was 82.94/100,000 and 65.41/100,000, respectively. The death rate from malignant tumors was markedly higher among fisherfolk than among peasants. In addition, the adjusted rate from malignancies for fisherfolk was higher than the readjusted

death rate from malignancies of 66.92/100,000 for the country as a whole between 1973 and 1977. This shows that deaths among fisherfolk from malignancies were not only higher than for peasants in the same area, but they were also greater than the national level. Except for Hebei, statistics for other provinces were about the same.

Table 1. Comparative Death Rates From Malignancies for Fisherfolk and Peasants in Five Provinces and Municipalities Between 1976 and 1979

1 地区	2 性别	3 死亡率1/10万		4 调整死亡率1/10万	
		渔 5 民	农 6 民	渔 5 民	农 6 民
	7 男	128.15	100.35	93.70	72.08
	8 女	73.88	65.88	65.34	56.21
	9 合计	101.70	82.94	82.19	65.41
江 10 苏	7 男	203.60	156.30	139.20	109.50
	8 女	91.27	90.46	84.32	71.05
	9 合计	105.10	118.50	121.00	80.57
河 11 北	7 男	91.49	95.80	63.53	63.09
	8 女	61.96	69.37	52.16	53.95
	9 合计	77.59	81.63	62.15	62.43
辽 12 宁	7 男	113.70	60.95	84.48	44.95
	8 女	63.77	43.98	55.59	42.68
	9 合计	88.95	52.70	72.23	44.65
天 13 津	7 男	133.20	106.30	93.03	86.58
	8 女	108.30	54.98	102.20	67.41
	9 合计	122.10	79.20	99.65	77.66
山 14 东	7 男	135.80	125.80	104.30	92.00
	8 女	77.24	87.56	63.46	65.75
	9 合计	106.30	106.60	85.60	79.69

Key:

- |                                    |              |
|------------------------------------|--------------|
| 1. Area                            | 8. Females   |
| 2. Sex                             | 9. Total     |
| 3. Death rate 1/100,000            | 10. Jiangsu  |
| 4. Readjusted death rate 1/100,000 | 11. Hebei    |
| 5. Fisherfolk                      | 12. Liaoning |
| 6. Peasants                        | 13. Tianjin  |
| 7. Males                           | 14. Shandong |

Statistical results by sex show an adjusted death rate from malignancies for males in the five provinces and municipalities to have been markedly higher among fisherfolk than peasants. In terms of ratio by sex, for fisherfolk in the five provinces and municipalities, the adjusted death rate from malignancies for fisherfolk had a 1.42 sex ratio, which was higher than the 1.28 ratio for peasants.

Analysis by age showed one age group (5 years) in which the death rate from malignancies climbed more rapidly among fisherfolk than among peasants.

In terms of kinds of malignancies, among fisherfolk four kinds of cancer in descending order of occurrence were stomach cancer, liver cancer, esophageal cancer, and lung cancer. The adjusted death rate for these four kinds of cancers was markedly higher than for peasants.

Survey results showed that except for Hebei, in all other provinces and municipalities the adjusted death rate from malignancies was higher for fisherfolk than for peasants. Fisherfolk live for a long time in a marine environment, and their intake of aquatic products is vastly greater than that of peasants, and marine creatures function to concentrate environmental pollution in numerous marine products; therefore malignancies in coastal fisherfolk are markedly higher than among peasants, and marine pollution factors should be given serious attention. But for what reason do fisherfolk have a high death rate from malignancies. This will require further investigation and research.

#### B. Survey of Quantity of Toxic Substances in Human Hair

1. A total of 6,849 specimens of human hair were collected and tested for their mercury, arsenic, lead, and cadmium content. The mercury, arsenic, lead, and cadmium content of the hair of coastal fisherfolk was generally higher than that of peasants in the same area. Variation in the amount of mercury in the hair was particularly marked (see Table 2). Table 2 shows a mercury value markedly higher for fisherfolk in the five provinces and municipalities than for control group peasants in the local area.

For convenience in making comparisons of pollution levels among different provinces and municipalities in 1981, large numbers of samples taken in every province and municipality in the country during 1978 and 1979. Then 200 hair samples were taken in each of the five coastal provinces and municipalities, a total of 1,000 in all. These were tested under identical conditions for mercury (total mercury). Results showed a marked difference in the mercury content of fisherfolk versus peasants, and conclusions reached in each province and municipality were virtually identical.

It is generally acknowledged that the mercury content of hair may reflect the amount of mercury accumulation in the human body. The size of fluctuations from one area to another is substantial, and is largely related to the amount of mercury in environmental pollution, and the residual amount of mercury in food. Therefore, when evaluating the significance of hair mercury in fisherfolk in individual ocean areas, it is important to have a corresponding control group of hair mercury values as a basis. Among Bo Hai and Yellow Sea fisherfolk, the hair mercury value (total mercury) is several times higher than in the peasant control group, sometimes as much as more than 10 times higher. This shows a marked difference in the amount of accumulated mercury in the bodies of coastal fisherfolk and peasants. We believe this is related primarily to the amounts of aquatic products ingested. In coastal Shandong, 102 out of 831 hair samples from fisherfolk tested showed more than 10 micrograms per gram, notably in Wanggezhuang in Laoshan County, and in Shidao in Rongcheng County. More attention should be given these places and dynamic monitoring done.



Table 2. Total Mercury Content of Bo Hai and Yellow Sea Coastal Inhabitant's Hair (micrograms/gram)

地 1 区		渔 2 民		农 3 民		比 4 值 (渔民/农民)
		5 分数	6 均值	5 分数	6 均值	
辽 7 宁	鸭绿江口 12	30	0.78	30	0.26	3.00
	13 大连湾	100	1.33	120	0.55	2.42
	14 锦州湾	118	5.04	116	0.51	9.88
	15 獐子岛	119	3.84			
河 8 北	16 唐 山	102	1.55	112	0.21	7.38
	17 秦皇岛	119	7.41	115	0.41	18.07
	18 沧 州	120	1.16	119	0.45	2.58
天 9 津	19 塘 沽	125	2.12	142	0.55	3.86
	20 汉 沽	105	0.74			1.35
山 10 东	21 日照县	118	1.77	120	0.58	3.05
	22 崂山县	242	6.97	120	0.48	14.52
	23 荣城县	119	3.53			5.60
	24 烟 台	118	1.00			1.50
	25 牟 平			121	0.63	
	26 寿 光	115	1.46	122	0.11	13.27
	27 沾 化	119	0.63	127	0.11	5.73
江 11 苏	28 连云港	208	4.78	133	1.88	2.54
	29 盐城地区	119	0.98	120	0.46	2.13
	30 南 通	71	2.79	52	1.05	2.66

Key:

- |                                |                         |
|--------------------------------|-------------------------|
| 1. Area                        | 16. Tangshan            |
| 2. Fisherfolk                  | 17. Qinhuangdao         |
| 3. Peasants                    | 18. Cangzhou            |
| 4. Ratio (fisherfolk/peasants) | 19. Tanggu              |
| 5. Fraction                    | 20. Hangu               |
| 6. Mean value                  | 21. Rizhao County       |
| 7. Liaoning                    | 22. Laoshan County      |
| 8. Hebei                       | 23. Rongshan County     |
| 9. Tianjin                     | 24. Yantai              |
| 10. Shandong                   | 25. Mouping             |
| 11. Jiangsu                    | 26. Shouguang           |
| 12. Mouth of Yalu Jiang        | 27. Zhanhua             |
| 13. Dalian Bay                 | 28. Lianyungang         |
| 14. Jinzhou Bay                | 29. Yancheng Prefecture |
| 15. Jingzidao                  | 30. Nantong             |

## 2. Toxic Substances Content of Urine

A total of 541 urine samples were taken, which were tested for mercury, arsenic, cadmium, and organic chlorine pesticides. Among Shandong fisherfolk, urine arsenic values (373.19 micrograms per gram of creatinine) were markedly higher than for peasants (64.95 micrograms per gram of creatinine). Testing

for total mercury, and benzene hexachloride largely showed no pattern of difference between fisherfolk and peasants. Results of testing for mercury in Liaoning Province also showed fisherfolk to have higher amounts than peasants.

### 3. DDT and Benzene Hexachloride Content of Human Milk

Table 3 shows results of testing the DDT and benzene hexachloride content of 249 samples of human milk. No pattern of differences showed up between fisherfolk and peasants.

Table 3. Organic Chloride Content of Human Milk (milligrams/liter)

1 调查地区		2 职业	3 样品 数	DDT		4六六六	
				5 最高值	6 均值	5 最高值	6 均值
7       东	日照县 9	10 渔民 11 农民	19 19	0.050 1.122	0.017 0.102	0.153 0.478	0.061 0.202
	崂山县 12	10 渔民 11 农民	24 14	0.456 0.138	0.188 0.069	0.976 0.283	0.164 0.098
	荣城县 13	10 渔民	20	0.586	0.268	0.462	0.225
	牟平县 14	11 农民	20	0.749	0.342	0.483	0.229
	烟台市 15	10 渔民	20	1.262	0.687	2.024	0.852
	寿光县 16	10 渔民 11 农民	24 21	1.394 0.397	0.405 0.147	1.179 1.147	0.613 0.456
	沾化县 17	10 渔民 11 农民	17 28	0.126 0.584	0.037 0.131	0.120 0.187	0.110 0.091
	连云港 18	10 渔民 11 农民	12 11	0.203 0.088	0.046 0.018	0.354 0.436	0.126 0.196

Key:

- |                         |                      |
|-------------------------|----------------------|
| 1. Area surveyed        | 10. Fisherfolk       |
| 2. Occupation           | 11. Peasants         |
| 3. Number of specimens  | 12. Laoshan County   |
| 4. Benzene hexachloride | 13. Rongcheng County |
| 5. Maximum value        | 14. Mouping County   |
| 6. Mean value           | 15. Yantai City      |
| 7. Shandong             | 16. Shouguang County |
| 8. Jiangsu              | 17. Zhanhua County   |
| 9. Rizhao County        | 18. Lianyungang      |

### 4. DDT and Benzene Hexachloride Content of Human Fat

DDT and benzene hexachloride were found in all 160 samples of human fat. (See Table 4) Content was substantially the same in all provinces and municipalities of the country.

Table 4. DDT and Benzene Hexachloride Content of Fat From Coastal Bo Hai and Yellow Sea Fisherfolk and Peasants (micrograms/gram)

1 地 区	2 职业	3 样品数	DDT	4 六六六
5 天 津	9 渔民	21	8.16 (2.27~31.34)	7.05 ( 3.0~19.94)
	10 农民	75	2.07 (0.17~9.59)	8.04 (1.41~35.75)
6 山 东	9 渔民	8	7.14 (2.00~13.60)	3.96 (1.82~10.48)
	10 农民	2	7.21 (7.16~7.26)	5.50 (4.48~6.51)
7 江 苏	9 渔民	7	2.71 (未~4.95)	2.42 (0.06~6.06)
	10 农民	19	28.43 (0.47~108.81)	9.93 (1.03~47.14)
8 河 北	9 渔民	4	* 2.38	3.11
	10 农民	24	* 5.31	5.83

Key:

- |                         |               |
|-------------------------|---------------|
| 1. Area                 | 6. Shandong   |
| 2. Occupation           | 7. Jiangsu    |
| 3. Number of samples    | 8. Hebei      |
| 4. Benzene hexachloride | 9. Fisherfolk |
| 5. Tianjin              | 10. Peasants  |
|                         | 11. Median    |

C. Toxic Substances Content of Marine Products

From each of the provinces along the Bo Hai and the Yellow Sea, a total of 1,572 samples of fish, shellfish, shrimp and crabs were collected and tested for toxic substances including mercury, arsenic, lead, cadmium, chromium, DDT and benzene hexachloride. Results of analysis show that in some ocean areas pollutants in the water have been concentrated through the aquatic creatures' food chain causing pollution of marine products. In some samples, the toxic substances content exceeded food health standards.

Three out of 45 fish samples in Shouguang County, and 1 out of 13 shellfish samples in Laoshan County, Shandong Province had a mercury content greater than national health standards for food (0.3 milligrams/kilogram). The highest value was in fish from Shouguang County (1.10 milligrams/kilogram). Arsenic was found in all samples, and content was fairly high in crabs and shrimp from Laoshan. Benzene hexachloride content was below standards for food (it may not be more than 2 milligrams/kilogram). DDT was found in some samples. Fish from Rizhao County had five parts, which was more than national health standards for food permit (it may not be more than 1.0 milligrams/kilogram), and the maximum value was 2.53 milligrams/kilogram, 2.5 times the standard. The most arsenic was found in kelp.

Analysis of 82 samples of 13 kinds of marine products from Tianjin Municipality showed the highest cadmium content in arca granosa [a kind of clam]. Mean value was 3.51 milligrams/kilogram. (This was more than the 0.15-3 ppm cadmium content recommended by Sugimoto Shoten of Japan.)

Samples of marine products taken from the unpolluted Changshan Straits in Liaoning Province were used as controls, and the arsenic content of fish from Dalian Bay was 1 to 5 times greater than from the control; benzo (a) pyrene content was 3 to 12 times higher; arsenic content of shellfish from Dalian Bay was between 2 and 4 times higher than from the control. Cadmium content of fish from Jinzhou Bay was 15 to 50 times higher than from the control, and was as much as 6,000 times higher in shellfish. This shows a definite concentration of arsenic pollutants in the bodies of marine creatures in Dalian Bay and cadmium pollutants in Jinzhou Bay.

D. There was no apparent difference in the toxic substances content of food and drinking water between fishing areas and farming areas.

#### E. Toxic Substances Content of Sea Water and Submarine Mud

Testing for petroleum, mercury, arsenic, lead, cadmium, chromium, benzene hexachloride and DDT was done on 329 specimens of sea water and 17 specimens of submarine mud. Results show that both the Bo Hai and the Yellow Sea have been polluted by oil, mercury, arsenic, lead, cadmium, chromium, benzene hexachloride and DDT. In some areas of the sea, pollution by certain substances is serious, for example oil in the Bo Hai Bay, chromium in Jinzhou Bay, arsenic in Dalian Bay, and chromium in Jiaozhou Bay. However, overall, even though Bo Hai Bay is fairly seriously polluted with oil, and testing for oil in sea water on the near shore at Tianjin in 1978 showed a mean value of 0.165 milligrams per liter, in 1979 the mean value was somewhat lower at 0.089 milligrams per liter. Measurements for heavy metals content were low everywhere except at Hongdao in Shandong, where mercury content was fairly high.

#### F. Results of Observation of Other Indices

In order to understand further the effects of marine pollution on the health of coastal inhabitants, certain indices of the early effects of illnesses of local fisherfolk and peasants were explored at observation points where marine pollution was fairly serious. Concentration of mercury by marine organisms, and the amounts of heavy metal ingested by inhabitants through the food chain, as well as the level of fisherfolk immunity to such heavy metals and the distortion of their chromosomes were investigated. The investigations showed mercurio-methane in 100 percent of all marine products in the ocean around Hongdao. The overall average value for mercurio-methane was 17.41 micrograms per kilogram (1.30-91.90 micrograms per kilogram), which was 10 times lower than the 250 micrograms per kilogram (and 62-440 micrograms per kilogram) mercurio-methane content of marine products found in 1972 and 1973 inside and outside of Minamata Bay in Japan.

Laboratory tests confirmed the very strong ability and speed of phytoplankton to concentrate mercurio-methane. Within 12 hours, the mercurio-methane content of

algae in a 0.001 milligram/per liter solution of mercuromethane was 1.58 milligrams/kilogram. After having been eaten by fleas, within 48 hours the fleas' mercuromethane content was 1.51 milligrams/kilogram. After fish ate the fleas, mercuromethane showed up very rapidly in the fish's bodies. This shows that the food chain of aquatic creatures can rapidly transfer toxic substances in water into human bodies and damage human health.

Investigation of the diet of fisherfolk at Hongdao showed the ingestion of heavy metals through the diet of Hongdao fisherfolk to be as follows: total mercury, 0.015 milligrams; mercuromethane, 0.002 milligrams; lead, 0.047 milligrams; cadmium, 0.056 milligrams; chromium, 0.426 milligrams; and arsenic, 0.289 milligrams. At Zhangzidao, fisherfolk average daily ingestion of heavy metals was within limits set by the FAO and the WHO for amounts of toxic substances that can be tolerated per person per week (or day). Ingestion of mercury was higher among fisherfolk on Zhangzidao than on Hongdao as a result of a higher mercury content of shellfish at Zhangzidao versus Hongdao.

Results of investigation of chromosome distortion in Hongdao fisherfolk are shown in Table 5. Following statistical processing, there were no noticeable differences between Hongdao fisherfolk and control group cell chromosome distortion rates, and the distortion rate was similar to that of normal human chromosomes in other areas.

Table 5. Chromosome Distortion Values of Fisherfolk Group and Control Group

	<u>Fisherfolk group</u>	<u>Control group</u>
Number of cases	41	28
Number of cells examined	4,030	2,712
Number of distorted cells	37	26
Distortion rate	0.92	0.96

Testing was done for lysozyme in the saliva of fisherfolk at Dalian Bay and peasants at Liangjiadian; measurements of their lymphocyte conversion rates were taken, and experiments were conducted on the phytoagglutinin in their skin. Results uncovered no pattern of change in levels of immunity between the fisherfolk in Dalian Bay and nearby peasants.

Testing was done of  $\beta_2$  microglobulin in the urine of Beitang Commune fisherfolk, who eat a lot of arca granosa, with no changes found.

#### IV. Conclusions and Suggestions

1. The waters around the shore of the Bo Hai and the Yellow Sea have been polluted with oil, mercury, arsenic, lead and cadmium. In some marine areas, pollution by certain substances is fairly serious as, for example, petroleum in Bo Hai Bay, cadmium in Jinzhou Bay, arsenic in Dalian Bay, and chromium in Jinzhou Bay. However, in an overall sense, coastal pollution remains fairly light. For example, 1978 measurements of oil in the waters off the coast of Tianjin in the fairly seriously oil-polluted Bo Hai showed an average value of 0.165 milligrams/liter except for some samples that contained

0.3 milligrams/liter. In 1979, the average value was somewhat lower at 0.089 milligrams/liter. Testing for heavy metals content showed that except for a fairly high amount of mercury in some cases, content was fairly low.

2. Among the population no marked differences were seen between fisherfolk and peasants in the occurrence of chronic illnesses, immunity levels, or chromosome distortion.

3. The mercury, arsenic, lead and cadmium content of the hair of fisherfolk along the coast was higher than for peasants in nearby areas, with mercury being most marked. The mercury content of individual samples taken at the Laoshan County survey site in Shandong was fairly high; however, investigation of the average daily intake of mercury, arsenic, lead and cadmium of fisherfolk on Hongdao in the same county showed no levels higher than those set by the FAO and the WHO.

4. The death rate from malignant tumors of fisherfolk along the coast of the Bo Hai and the Yellow Sea was 82.19 per 100,000, which was markedly higher than the death rate for peasants of 65.41 per 100,000, and also higher than the adjusted death rate from malignancies of 66.92 per 100,000 for the country as a whole between 1973 and 1977. The incidence of four kinds of cancer among fisherfolk in declining order of occurrence was stomach cancer, liver cancer, esophageal cancer and lung cancer. The adjusted death rate from these four kinds of cancers was markedly higher than among peasants. The age at which deaths from malignancies rises rapidly among fisherfolk is one age group earlier (5 years old) than for peasants.

To summarize the foregoing, except for the higher mortality rate from malignancies and the higher amount of mercury in hair in fisherfolk versus peasants, which may be accounted for by marine environmental factors, no marked differences were discovered in the health of fisherfolk versus peasants in other regards.

A large amount of data was obtained as a result of 3 years of investigation and research, and a fairly systematic understanding was gained of pollution along the seacoast and of the state of health of inhabitants along the Bo Hai and the Yellow Sea. These investigation and research materials constitute a scientific basis on which departments concerned may formulate plans and other pertinent programs and policies for prevention and control of pollution in the Bo Hai and the Yellow Sea. They are also background materials for future thoroughgoing investigation and study of this matter.

It is recommended that periodic dynamic observations be made of the effects on human health of Bo Hai and Yellow Sea pollution. Special study should be devoted to reasons for the fairly high cancer mortality rate of coastal fisherfolk. Continued action should also be taken to clean up and bring under control portions of the sea in fairly heavily polluted Jinzhou Bay, Jiaozhou Bay, Dalian Bay and Bohai Bay.

9432  
CSO; 5400/4151

TYPHOID FEVER OUTBREAK CLAIMS SIX LIVES

East London DAILY DISPATCH in English 22 Jul 83 p 1

[Text]

**QUMBU** — A typhoid fever outbreak in the district here has claimed six lives.

A total of 43 cases have been referred to the Nessie Knight Hospital at Sulenkama over a two-month period.

This was confirmed by the superintendent, De Helmut Amit.

Ten people — four children, two men and four women — are in isolation at the hospital but their condition has improved and they are waiting to be discharged.

Dr Amit refused to name the dead but confirmed that four were from two families from Tsilitwa — a nearby village with a population of about 1 000 — which was the worst-hit area.

The other two victims were from Qwetlana, near Mount Frere and Shawbury.

Dr Amit said everything was being done to control the situation but he was up against some problems, the worst being the poor infrastructure.

The Department of Health has rushed water into the area and yesterday new water tanks were seen at strategic points in Tsilitwa.

Dr Amit said: "The first course of action was

to provide additional water to enhance personal hygiene.

"The provision of good clean water for drinking was essential. Springs are also being chlorinated and we are appealing to people in the affected areas to boil drinking water."

Besides the problem of catering for a wide area, they were also up against superstition and religious resistance to the campaign to stem the outbreak.

Dr Amit confirmed that there were enough anti-biotics available to treat disease. — DDR.

## BRIEFS

PASTEURELLOSIS, RABIES WORK--In the first 5 months of 1983 the Saisettha veterinary cadres in Vientiane Capital attentively organized and determinedly injected vaccine against diseases for animals which belong to people within their district, in order to ensure draft labor for the production of this year's rice season. By working determinedly they were able to inject vaccine for pasteurellosis and rabies in a total of 629 animals, and to sterilize 105 pigs. Also, they treated and cured 64 animals that had contracted diseases. They also propagandized the work on the new method of animal raising, e.g., ways to take care of animals including feeding and watering, limiting animal slaughter especially for pregnant animals, etc. Now these cadres are actively and cheerfully carrying out their work continuously in order to achieve victory in the first 3 month's plan. /Text/ /Vientiane VIENTIANE MAI in Lao 7 Jun 83 p 1/ 9884

ANTHRAX, PASTEURELLOSIS TREATMENT--Since April 1983 the veterinary cadres of Sisattanak District, Vientiane Capital, have organized to determinedly inject vaccine against diseases and to treat animals belonging to the people within their own district. This is to ensure that the domestic animals, e.g., buffalo and cattle, are healthy and strong and effectively to ensure draft labor in this year's production. In carrying out their work they were able to inject a total of 267 buffalo, cattle and pigs and they treated a total of 34 animals with anthrax and pasteurellosis. Now these district veterinary cadres are continuously and actively carrying out their work to serve the people in the spirit of emulation of implementing the third party congress of the LPRP to make it a success and a reality. /Text/ /Vientiane VIENTIANE MAI in Lao 14 May 83 p 1/ 9884

VIENTIANE VETERINARY WORK--In the 1st quarter of 1983 the veterinary cadres of Phon Hong District, Vientiane Province, determinedly examined and treated the people's domestic animals. These animals were sick with hoof and mouth disease and pasteurellosis. After carrying on the work in that period they were able to inject medicine against disease to a total of over 500 cattle and buffalo. They also treated 10 sick animals. Besides this, they propagandized the new correct scientific animal-raising method, especially how to take care of animals, feeding and watering, along with the restrictions on animal slaughtering, etc. This will increase the draft labor and the food supply in this district. Now these veterinary cadres are continuously and actively carrying out the work in the spirit of emulation of the LPRP third party congress plenum to make it become a reality. /Text/ /Vientiane VIENTIANE MAI in Lao 22 Apr 83 pp 1, 4/ 9884



SARAVANE VETERINARY WORK--(K. P. L.) In the 1st quarter of this year cadres in the veterinary section of the agriculture unit of Kong Sedone /Saravane Province/ actively injected vaccines against diseases in the people's domestic animals, especially injections to prevent pasteurellosis, brucellosis, etc. During this period they were able to inject 2,880 buffalo, 631 cattle, 1,460 pigs, and 30 goats. Moreover, they also treated sick animals that had contracted different diseases. There were 14 buffalo, 8 cattle and 10 pigs. Excerpt /Vientiane KHAOSAN PATHET LAO in Lao 9 May 83 p A4/ 9884

SAVANNAKHET VETERINARY WORK--The work of injecting vaccines against diseases and treating animals at different veterinary units nationwide within the first 6 months of 1983 was widely and effectively carried out. Especially in Khanthaboury District, Savannakhet Province, the veterinary unit of this district injected vaccines to prevent pasteurellosis and hoof and mouth disease in the people's domestic animals. These diseases often occur continuously. A total of 19,680 animals were vaccinated. Moreover, they also treated and cured 78 animals that had contracted disease, including 47 pigs. This is to ensure the health of the people's animals, and to expand widely all kinds of animal husbandry. One reason is to ensure draft labor to be used effectively in agricultural production in this year's season, to meet the demand for meat, and to have enough food for the people. Text /Vientiane PASASON in Lao 21 Jun 83 p 1/ 9884

CSO: 5400/4436

BRUCELLOSIS STRIKES DAIRY CATTLE

Auckland THE NEW ZEALAND HERALD in English 22 Jul 83 p 3

[Text]

<p>NZPA Palmerston North Shannon dairy farmer Mr Nolan Newport will have his entire herd of 211 cattle slaughtered next week.</p>	<p>than 300 dairy stock in the initial outbreak, and his case for compensation caused a national controversy.</p>	<p>watu Federated Farmers, Mr John Hopkins, said: "The action by the ministry also minimises the risk of infecting neighbouring herds which is always foremost in the minds of the farmers in the area."</p>	<p>Initial tests produced indications of brucellosis among the herd, but when tested again the herd was clear. However, in another test last week, eight cattle were positive.</p>
<p>He is the latest victim of the brucellosis outbreak that has troubled the district since last year.</p>	<p>This time the Ministry of Agriculture and Fisheries has stepped in immediately and purchased the entire Newport herd at current market values.</p>	<p>He said the disease showed up earlier this year when one of Mr Newport's cows aborted, and was found to have brucellosis.</p>	<p>The immediate slaughter of the herd — rather than continual testing — should cut down further outbreaks.</p>
<p>Mr Newport's neighbour, Mr Ashley Smith, lost more</p>	<p>The president of Mana-</p>		

CSO: 5400/4453

EDITORIAL URGES MEASURES AGAINST BRUCELLOSIS

Auckland THE NEW ZEALAND HERALD in English 23 Jul 83 p 6

[Text]

A Shannon dairy herd of more than 200 cows is about to be slaughtered because some of the animals are suffering from brucellosis. Bovine tuberculosis and brucellosis are often thought of as beaten diseases because of the extensive campaigns which have been waged against them by the Ministry of Agriculture and Fisheries. The Shannon case demonstrates that the industry cannot be complacent.

In fact, while the incidence of both diseases has fallen sharply, eradication has not yet been achieved, although victory over brucellosis may not be many years away.

When the drive to eradicate brucellosis began in the early 1970s, about 70,000 cattle were infected. Now only about 90 herds are involved and the ministry hopes New Zealand will be free by 1989. Even in a country with an impressive record in dealing with animal diseases, that is a notable achievement.

The effort and cost devoted to eradication are a measure of the importance New Zealand places in meeting the hygiene requirements set by international markets. They are also a reminder of how exacting many overseas countries can be. For New Zealand, there is no choice; the customer is always right.

CSO: 5400/4453

# RINDERPEST ERADICATION CAMPAIGN REPORTED SUCCESSFUL

Kaduna NEW NIGERIAN in English 25 Jul 83 p 11

[Article by Dupe Motojehi]

[Text]

THE national co-ordinator of Rinderpest Campaign Committee, Dr. Dele Oluokun has said that measures adopted in eradicating rinderpest in the country had achieved a remarkable success.

He told the national co-ordinating committee (NCC) meeting at Durbar Hotel on Thursday that about 20 per cent of the vaccines issued had been applied to about nine million cattle. This had reduced the number of deaths resulting from the various outbreaks of the disease in the country.

The national coordinator said a total of 11,508,600 doses of rinderpest vaccines were procured and distributed to states according to their needs.

Other measures, including patrol checks at our borders with neighbouring countries and constant monitoring of spread of the disease had also helped greatly to improve the situation.

Dr. Olulokun said the measures were still being intensified to ensure eradication of the disease, disclosing that more funds would be released to states for the

eradication of the disease.

Although, he said, a Pan-African rinderpest campaign had been on for quite a while, the "salvation of our national herd vests only on the immunity status we create in the national herd which must reach a minimum of 75 per cent cover."

He explained that the NCC meeting had been empowered to review the status of campaign strategies and policies, analyse existing problems and devise resolutions for implementing proposals and strategies.

He said 152 outbreaks of the disease were reported between the end of March and early April this year while the figure rose to 341 in 15 states of the federation.

As a result of these, he said, efforts had been intensified at the border posts to make sure that movement of cattle into the country was adequately monitored.

He appealed to the committee to take bold steps to enlist further strategies to combat the various problems militating against the eradication of rinderpest in the country.

CSO: 5400/314

VETERINARY OFFICIAL DENIES PRESENCE OF FOOT-AND-MOUTH

Mbabane THE TIMES OF SWAZILAND in English 25 Jul 83 p 4

[Text]

"I WOULD like to draw the attention of the reporter who published the article entitled "Border Rustling Menace" on the Swazi News of July 12, 1983.

Whilst there have been cases of cattle smuggling across Swaziland border with Mozambique, it is incorrect to say that there has been an outbreak of Foot-and-Mouth Disease at Lomahasha area resulting from cattle smuggled from Mozambique. It was incorrect to report that "Rustled cattle from that country had in fact transported the disease into Lomahasha area which was within the redline separating the rest of the country from any parts of the Lubombo District."

"The Assistant Health Inspector for Lomahasha, Mr. Andreas Bhembe, denied having told the reporter who phoned him on Monday June 27, 1983, that he had said Mozambique

and South Africa did not cooperate with the Swaziland Government in trying to trace stolen cattle.

"On the contrary, from experience the veterinary authorities of the two countries do cooperate with the veterinary authorities of Swaziland. Already, a number of consultations on this matter have taken place between Swaziland officials and those of the two countries.

"On the contrary, from experience the veterinary authorities, no case of Foot-and-Mouth Disease (FMD) has occurred close to our border during the last three years. This situation is also true with the border with the Republic of South Africa.

"I would further like to put the record straight that Swaziland has been free of Foot-and Mouth Disease since the last outbreak at Mhlabubovu in Lubombo District in 1969. Soon thereafter, the whole Lubombo plateau was cordoned off by means of the "Red Line" double fences and declared a permanent quarantine area. All cattle,

sheep and goats in this area are vaccinated against F.M.D. annually.

"Constant surveillance for the disease is exercised in all dip tanks in this area. No animals may be moved out of this area into the rest of Swaziland unless they have been put into an intensive quarantine station either at Maphiveni or Sivunga for at least 21 days, during which period they are observed for any symptoms of the disease.

Only after this screening process can animals be allowed to move into any part of Swaziland.

**Dr. Nick Gumedze**  
**Director of Veterinary**  
**Services.**

CSO: 5400/315

CONCERN VOICED OVER SPREAD OF PATERSON'S CURSE WEED

Melbourne THE AGE in English 13 Jul 83 p 15

[Text] Victoria's weed control authority is concerned that without biological control, Paterson's Curse could flourish in many parts of the State.

In the past financial year, Victoria spent an estimated \$350,000 trying to control the flowering blue weed.

But since the end of the drought the Vermin and Noxious Weeds Destruction Board has warned that Paterson's Curse has germinated ahead of pasture in many areas. The board said that the curse would readily exclude improved pasture species by smothering seedling germination.

A spokesman for the board said yesterday it was often a financial hardship for farmers to get rid of Paterson's Curse by spraying. It also occurred in many areas where access was difficult, but

where the seed could be easily transmitted by run-off.

The most economical and long-term way of dealing with Paterson's Curse was by biological control.

A decision reached last week in the South Australian Supreme Court means the CSIRO is restrained from continuing its biological control program for Paterson's Curse, or proceeding with a public inquiry into the desirability of controlling the weed.

Not everyone is unhappy about the decision. Beekeepers use Paterson's Curse to build up their hives in spring, and in some dry farm areas the weed is referred to as Salvation Jane for the feed it provides, mainly for sheep. In the Riverina it has earned the endearing name of Riverina Blue Bell because of its appearance.

A senior research scientist for the CSIRO, Dr Ernest Del Foss, said Paterson's Curse provided the classic case of conflict of interest in biological control.

Dr Del Foss said there were very few effective alternatives to control Paterson's Curse. This year the problem was particularly bad because the weed had been able to germinate and take over before any other crop got started.

Three species of insects bred to control the weed were released in winter 1980 at selected sites in NSW before an injunction was sought by opponents of the program. Later surveys showed that none of the early samples survived.

Dr Del Foss said the CSIRO had intended to make mass releases of the moths in the following spring.

CSO: 5400/7595

BRIEFS

MOSQUITO SPRAYING--Ground fogging for mosquito control by the Insect Control Unit of the Department of Environmental Health has been reintensified throughout New Providence because of "heavy rains." According to Director of Environmental Health Glenn Archer the spraying is just "routine." "It's necessary for us to intensify it during the rainy season," he said, explaining that with the rains come more mosquitoes. The hours of spraying are between 4 am to 6 am and 7 pm to 8 pm. Mr Archer suggested that people who operate farms or bee hives notify the Chief Health Inspector at School Lane so that they can be advised of the precautions necessary. [Text] [Nassau THE TRIBUNE in English 9 Jul 83 p 1]

CSO: 5400/7593

EGYPT

BRIEFS

TOXINS FOUND IN PLANTS--Analyses conducted by a team of Egyptian scientists have confirmed that fen thistle and chicory, both commonly eaten in the countryside, are among the noxious plants because they contain poisonous alkalis. Also confirmed was the fact that potatoes and tomatoes or any unripe, rotting or moldy fruits and vegetables contain toxins. The Saudi newspaper AL-SHARQ AL-AWSAT, which carried the story, noted that the scientists injected experimental rats with the alkalis and they subsequently exhibited symptoms indicating enlarged livers and spleens and abdominal dropsy. [Text] [Cairo AL-AHALI in Arabic 27 Jul 83 p 1]

CSO: 5400/4613



GREECE

BRIEFS

APPEARANCE OF MEDITERRANEAN FLY--Apricots that have been buried are causing serious damage to apple and orange trees and tomato plants in the Korinthia Nome. Swarms of Mediterranean flies are feeding on the buried fruit and have brought destruction to large areas in mountain and hilly regions of this nome, affecting tens of tons of fruit. Peasants have informed us that agronomists cannot understand the reasons for the spread and the rapidity of the attack. Korinthia residents are angry. Despite the fact that many among them had sprayed their fields--without having been warned to do so by the competent authorities--they have been unable to prevent the catastrophic effects of the attacks by Mediterranean flies. Some residents' harvest has been completely destroyed, and they are demanding the immediate intervention of the OGA [National Organization for Agricultural Insurance] and of the competent authorities of the Ministry of Agriculture to estimate the damage and grant them adequate compensation. [Excerpts] [Athens I AVGI in Greek 9 Aug 83 p 3]

CSO: 5400/2571

PHILIPPINES

BRIEFS

ARMYWORM INFESTATION SPREADING--COTABATO CITY, July 25--The armyworm infestation which has reportedly destroyed 1,000 hectares of corn plants in South Cotabato has spread to nearby Maguindanao and North Cotabato, it was reported. Region XII Ministry of Agriculture assistant director Mauro Arcega said reports from fieldmen claimed the armyworms have attacked a big portion of corn plants which were ready for harvest in the towns of Upi, Buldon, and Barrira in North Cotabato. Arcega said Mindanao agriculture provincial officer Arusama Alid reported that most of the affected cornfields were covered by the government's Maisagana program and Planters Product financing scheme. Arcega said the armyworms were reported to have infested the Ministry's experimental station in barangay Aroman, Carmen, where mongo was planted. Mindanao and North Cotabato agriculture officials have reportedly dispatched pest control officers to the affected areas. The armyworms reportedly destroyed ₱2 million worth of corn plants in South Cotabato. [Tony Pe. Rimando] [Text] Manila BULLETIN TODAY in English 26 Jul 83 pp 1, 11]

CSO: 5400/4452

## BRIEFS

INSECT PLAGUE ENDANGERS VINEYARDS--A new plague is threatening Portuguese vineyards; it appeared around 15 years ago and now is widespread, according to the most recent issue of the specialized journal VIDA RURAL. The insect, the blight or green cicada [*Empoasca Flavescens*], has increased its attacks each year. Initially detected around 1967 in Alentejo in Redondo, it was later found in Algarve, then 3 years ago in Pegoes and more recently still in the western region between Alenquer and Bombarral. According to experts, the cicada seems to spread from the south to the north of the country and "may in a few years spread all over Portugal." Like small grasshoppers, the cicadas attach themselves to the underside of leaves, after hibernating in cork oak trees, oaks, brambles, briars and ligustrum and attack in three or four generations in May, June and July. The toxic saliva left by the punctures in the stems of the vine kills the leaves and weakens plants generally, causing a drop in production and the alcoholic content; it has adverse effects for years. [Text] [Lisbon O DIA in Portuguese 29 Jul 83 p 8] 9479

CSO: 5400/2567

## BRIEFS

POSSIBILITY OF 'LOCUST PLAGUE'--THE Northern Cape may be hit by a severe locust plague when the drought breaks, the Kimberley Locust Control Officer Mr P S Fouche said yesterday. 'The locusts need dampness before they can multiply--so as long as the drought lasts we will be completely untouched by locust swarms,' he said. Mr Fouche said nothing could be done to prevent an outbreak at this stage. Measures to curb a plague could be taken only after the swarms had developed. Douglas Hopetown Prieska and Marydale were the areas most likely to be affected initially, he said. 'As soon as we hear reports of a swarm we will race to the area to stop the plague from spreading,' Mr Fouche said. The secretary of the Northern Cape Agricultural Union Mr J C van der Westhuizen, said the locust threat was an annual problem but could be far worse this year. 'It is very important that outbreaks are noted early,' he said. Mr van der Westhuizen said teams of farmers would help the Locust Control Board kill the swarms with insecticide if necessary. [Text] [Kimberley DIAMOND FIELDS ADVERTISER in English 23 Jul 83 p 1]

CSO: 5400/316

COLORADO BEETLES APPEAR IN SCANIA

Stockholm DAGENS NYHETER in Swedish 3 Aug 83 p 6

[Article by Thomas Jonsson]

[Text] The damaging insect, the Colorado beetle, was found in Scania on Tuesday morning after Denmark was afflicted with an invasion of the wind-borne Colorado beetles on Monday. Plant protection authorities in both countries are now trying to render the finds harmless before they are able to attack any potato fields.

The police in southeast Scania reported on Tuesday to the plant inspection office in Malmo the first beetles on Swedish soil: some 10 on Loderup beach 20 kilometers east of Ystad, and one beetle at Sjobo, 26 kilometers north of Ystad. Individual finds have been also been reported on the west coast, south of Halmstad.

The Colorado beetles were found late Monday along south coast of Lolland and Falster. On Tuesday beetles were found for the first time ever in eastern Sjalland, among other places at Middelgrunds fort by the Oresund.

Feared Insect

"We probably have not found all of them yet. Up to now we have found 22 individual beetles. But quite surely many, many more have come to land," says Inspector Henning Andersen of the Danish State Plant Inspection.

"Even more have been washed ashore in Lolland-Falster. We have people there now checking what has happened."

The Colorado beetle is a feared, harmful insect which attacks potatoes. It eats the tops and can cause significant economic losses in big potato fields. Normally, the beetle is not found in Denmark or Sweden.

The new invasion of beetles apparently has been caused by the severe thunderstorms with chaotic winds, which prevailed over the southern Baltic Sea on Monday afternoon.

"The beetles which we have found come with the wind from Poland. We see that from the direction of the wind. We also know that the fight against the Colorado beetle in Poland was a complete failure. In certain areas there are a million beetles per hectare of potato fields," Henning Andersen says.

#### Being Killed

People in the Plant Inspection Bureau of the Swedish Agricultural Board have a somewhat different theory about where the beetles come from.

"It would seem that they come from Germany if Denmark has up to now had more beetles than we," says Gunnar Gransbo at the Plant Inspection.

Grensbo believes that as yet there is no great risk to potato cultivation in Scania and Blekinge. The few finds that have been made can be gathered up and killed before they are able to spread.

The Colorado beetle looks like a big ladybug. It has a yellow-brown underside and a yellow top with 10 black longitudinal bands on its wing sheath.

The beetles, which are spread by the wind, land in the sea and are driven to land along our southern coasts. There they dry and then can fly on. A beetle which happens to find a potato field can hibernate over the winter, then to wake up in May, reproduce and lay eggs.

#### Unusually Late

Every year isolated beetles are found in Sweden. Most of them have come with the transportation of fruit and vegetables from Europe. A few individual Colorado beetles which have landed in Scania have been found up to now this summer.

The last big Colorado beetle invasion of Sweden and Denmark was in 1972 when almost a 100,000 beetles were collected along the beaches from Oland, around the coast of Scania and even up to Halland. At that time the beetle was able to get a hold in Scania's big potato fields. They had to be sprayed with pesticide for several years.

The Colorado beetle is fought by spraying with pesticide. If only a few have been found, they are collected by hand. Because of the climate the beetle can not spread north of Scania-Blekinge-Halland.

Earlier this summer Denmark had an invasion of Colorado beetles from Germany in the country's most important potato area in South Jutland. There the potato fields have been sprayed since June.

According to the Plant Inspection people a beetle invasion as late as August is unusual.

6893

CSO: 5400/2565

END